



***Enduring Resources***

475 17<sup>th</sup> Street Suite 1500 Denver Colorado 80202  
Telephone 303 573-1222 Fax 303 573 0461

June 8, 2006

Utah Division of Oil, Gas and Mining  
1594 West North Temple, Suite 1210  
P. O. Box 145801  
Salt Lake City, Utah 84114-5801

Attn.: Ms. Diana Whitney

RE: Enduring Resources, LLC  
Sand Wash 12-22-44-32  
SE-SE 32-12S-22E  
State Lease: ML-47089  
Uintah County, Utah

Dear Ms. Whitney:

Enclosed are two original applications to drill concerning the above-referenced proposed well. This information was also submitted to SITLA.

Enduring Resources, LLC is requesting the Utah Division of Oil, Gas and Mining to hold this application and all future information as confidential.

If any questions arise or additional information is required, please contact me at 303-350-5114.

Very truly yours,

**ENDURING RESOURCES, LLC**

Alvin R. (Al) Arlian  
Landman-Regulatory Specialist

ara  
Enclosures:

cc: SITLA w/ attachments

**RECEIVED**

**JUN 12 2006**

**DIV. OF OIL, GAS & MINING**

**STATE OF UTAH**  
DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF OIL, GAS AND MINING

FORM 3

AMENDED REPORT ☐  
(highlight changes)

<b>APPLICATION FOR PERMIT TO DRILL</b>				5. MINERAL LEASE NO: <b>ML-47089</b>	6. SURFACE: State
1A. TYPE OF WORK:    DRILL <input checked="" type="checkbox"/> REENTER <input type="checkbox"/> DEEPEN <input type="checkbox"/>				7. IF INDIAN, ALLOTTEE OR TRIBE NAME:	
B. TYPE OF WELL:    OIL <input type="checkbox"/> GAS <input checked="" type="checkbox"/> OTHER _____    SINGLE ZONE <input type="checkbox"/> MULTIPLE ZONE <input checked="" type="checkbox"/>				8. UNIT or CA AGREEMENT NAME:	
2. NAME OF OPERATOR: <b>Enduring Resources, LLC</b>				9. WELL NAME and NUMBER: <b>Sand Wash 12-22-44-32</b>	
3. ADDRESS OF OPERATOR: <b>475 17th St., Ste 1500    CITY    Denver    STATE    CO    ZIP    80220</b>			PHONE NUMBER: <b>(303) 350-5114</b>		
4. LOCATION OF WELL (FOOTAGES)  AT SURFACE: <b>801' FSL - 512' FEL</b> <i>631091 X    39.725115</i> AT PROPOSED PRODUCING ZONE: <i>4398157Y    Same    - 109.470436</i>				10. FIELD AND POOL, OR WILDCAT: <del>Undesignated</del> <i>Wildcat</i>	
				11. QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: <b>SESE    32    12S    22E</b>	
14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE: <b>63.8 South of Vernal, UT</b>				12. COUNTY: <b>Uintah</b>	
				13. STATE: <b>UTAH</b>	
15. DISTANCE TO NEAREST PROPERTY OR LEASE LINE (FEET) <b>512'</b>		16. NUMBER OF ACRES IN LEASE: <b>640</b>		17. NUMBER OF ACRES ASSIGNED TO THIS WELL: <b>40 acres</b>	
18. DISTANCE TO NEAREST WELL (DRILLING, COMPLETED, OR APPLIED FOR) ON THIS LEASE (FEET) <b>1000' +</b>		19. PROPOSED DEPTH: <b>6,800</b>		20. BOND DESCRIPTION: <b>RLB0008031</b>	
21. ELEVATIONS (SHOW WHETHER DF, RT, GR, ETC.): <b>6296'    RT-KB</b>		22. APPROXIMATE DATE WORK WILL START: <b>8/1/2006</b>		23. ESTIMATED DURATION: <b>20 days</b>	

24. PROPOSED CASING AND CEMENTING PROGRAM							
SIZE OF HOLE	CASING SIZE, GRADE, AND WEIGHT PER FOOT	SETTING DEPTH	CEMENT TYPE, QUANTITY, YIELD, AND SLURRY WEIGHT				
20"	14"    line pipe	40	3 yards	Ready Mix			
11"	8-5/8"    J-55    24#	2,000	Premium Lead	183 sxs	3.50	11.1	
			Premium Tail	183 sxs	1.15	15.8	
7-7/8"	4-1/2"    N-80    11.6#	6,800	Class G	58 sxs	3.3	11.0	
			50/50 Poz Class G	810 sxs	1.56	14.3	

25. ATTACHMENTS	
VERIFY THE FOLLOWING ARE ATTACHED IN ACCORDANCE WITH THE UTAH OIL AND GAS CONSERVATION GENERAL RULES:	
<input checked="" type="checkbox"/> WELL PLAT OR MAP PREPARED BY LICENSED SURVEYOR OR ENGINEER  <input checked="" type="checkbox"/> EVIDENCE OF DIVISION OF WATER RIGHTS APPROVAL FOR USE OF WATER	<input checked="" type="checkbox"/> COMPLETE DRILLING PLAN  <input type="checkbox"/> FORM 5, IF OPERATOR IS PERSON OR COMPANY OTHER THAN THE LEASE OWNER

NAME (PLEASE PRINT) <u>Alvin R. (Al) Arlian</u>	TITLE <u>Landman - Regulatory Specialist</u>
SIGNATURE	DATE <u>6/8/2006</u>

(This space for State use only)

API NUMBER ASSIGNED: 43-047-38286

**Approved by the  
Utah Division of  
Oil, Gas and Mining**

**RECEIVED  
JUN 12 2006**

DIV. OF OIL, GAS & MINING

Date: 06-10-2006  
By:

# T12S, R22E, S.L.B.&M.

S89°58'W - 79.96 (G.L.O.)

## ENDURING RESOURCES

WELL LOCATION, SAND WASH  
12-22-44-32, LOCATED AS SHOWN IN  
THE SE 1/4 SE 1/4 OF SECTION 32,  
T12S, R22E, S.L.B.&M. UTAH COUNTY,  
UTAH.



### NOTES:

1. Well footages are measured at right angles to the Section Lines.
2. Bearings are based on Global Positioning Satellite observations.

THIS IS TO CERTIFY THAT THE ABOVE PLAT WAS  
PREPARED FROM FIELD NOTES OF ACTUAL SURVEYS  
MADE BY ME OR UNDER MY SUPERVISION AND THAT  
THE SAME ARE TRUE AND CORRECT TO THE BEST OF  
MY KNOWLEDGE AND BELIEF.

REGISTERED LAND SURVEYOR  
REGISTRATION NO. 362251  
STATE OF UTAH  
KOLBY R.  
KOLBY R.

## TIMBERLINE LAND SURVEYING, INC.

38 WEST 100 NORTH. - VERNAL, UTAH 84078  
(435) 789-1365

DATE SURVEYED: 05-15-06	SURVEYED BY: K.R.K.	SHEET  2  OF 10
DATE DRAWN: 05-19-06	DRAWN BY: M.W.W.	
SCALE: 1" = 1000'	Date Last Revised:	

### WELL LOCATION: SAND WASH 12-22-44-32

ELEV. UNGRADED GROUND = 6283.4'

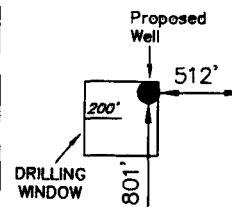
32

Found 1922 Brass Cap  
2.0' above a 2.0' dia  
X 1.0' high pile of  
stones.

Found 1922 Brass Cap  
1.2' above ground.  
Pile of Stones 2.0' Dia  
X 1.0' High 2.0' west  
of cap.

Found 1920 Brass Cap  
1.0' Above Ground.  
Cedar Post 1.5' West  
of Cap.

Found 1920 Brass Cap  
flush with top of Pile  
of Stones 3.0' dia X  
2.0' high.



Found 1920 Brass Cap 1.5'  
above ground. Steel post  
0.5' south and cedar post  
2.0' east of cap

### SAND WASH 12-22-44-32

(Proposed Well Head)

NAD 83 Autonomous

LATITUDE = 39° 43' 30.46"

LONGITUDE = 109° 28' 16.34"

▲ = SECTION CORNERS LOCATED

BASIS OF ELEVATION IS BENCH MARK 70 EAM 1965  
LOCATED IN THE SW 1/4 OF SECTION 31, T12S,  
R22E, S.L.B.&M. THE ELEVATION OF THIS BENCH  
MARK IS SHOWN ON THE BATES KNOLLS 7.5 MIN.  
QUADRANGLE AS BEING 6356'.

N0°03'W (G.L.O.)  
N00°06'20"W - 2641.81' (Meas.)

N89°56'09"W - 2639.82' (Meas.)

N89°58'W (G.L.O.)

N89°57'08"W - 2641.70' (Meas.)

N0015'44"W (Basis of Bearings)  
N0°03'W (G.L.O.)  
2645.60' (Measured)

**Enduring Resources, LLC  
East Bench 11-22-31-32  
NW-NE 32-11S-22E  
Uintah County, Utah**

**State Lease: ML-47076**

**ONSHORE ORDER 1 - DRILLING PLAN**

**1. Estimated Tops of Geological Markers:**

Formation	Depth (K.B.)
Uinta	Surface
Green River	100
Wasatch	2763
Mesaverde	4646

**2. Estimated Depths of Anticipated Water, Oil, Gas or Other Minerals:**

Substance	Formation	Depth (K.B.)
	KB-Uinta Elevation: 6296'	
Oil / Gas	Green River	100
Oil /Gas	Wasatch	2763
Oil /Gas	Mesaverde	4646
	Estimated TD	6800

A 11" hole will be drilled to approximately 2000 feet. The depth will be determined by the depth that the Birds Nest zone is encountered. The hole will be drilled 400 feet beyond the top of the Birds Nest zone and surface casing will be set.

**3. Pressure Control Equipment: (3000 psi schematic attached)**

- A. Type: Eleven (11) inch double gate hydraulic BOP with eleven (11) inch annular preventer on 3,000 psi casinghead, with 3,000 psi choke manifold equipped per the attached diagram. BOPE as specified in *Onshore Oil & Gas Order Number 2*. A PVT, stroke counter and flow sensor will be installed to check for flow and monitor pit volume.
- B. Pressure Rating: 3,000 psi BOPE
- C. Kelly will be equipped with upper and lower Kelly valves.
- D. Testing Procedure: Annular Preventer

At a minimum, the annular preventer will be pressure tested to 50% of the stack rated working pressure for a period of ten (10) minutes or until provisions of the test are met, whichever is longer.

At a minimum, the above pressure test will be performed:

1. When the annular preventer is initially installed;
2. Whenever any seal subject to test pressure is broken;
3. Following related repairs; and
4. At thirty (30) day intervals.

In addition to the above, the annular preventer will be functionally operated at least weekly.

#### Blow-Out Preventer

At a minimum, the BOP, choke manifold, and related equipment will be pressure tested to the approved working pressure of the BOP stack (if isolated from the surface casing by a test plug) or to 70% of the internal yield strength of the surface casing (if the BOP is not isolated from the casing by a test plug). Pressure will be maintained for a period of at least ten (10) minutes or until the requirements of the test are met, whichever is longer.

At a minimum, the above pressure test will be performed:

1. When the BOP is initially installed;
2. Whenever any seal subject to test pressure is broken;
3. Following related repairs; and
4. At thirty (30) day intervals.

In addition to the above, the pipe and blind rams will be activated each trip, but not more than once each day. All BOP drills and tests will be recorded in the IADC driller's log.

#### E. Miscellaneous Information:

The blowout preventer and related pressure control equipment will be installed, tested and maintained in compliance with the specifications in and requirements of *Onshore Oil & Gas Order Number 2*.

#### 4. Proposed Casing & Cementing Program:

##### A. Casing Program: All New

Hole Size	Casing Size	Wt./Ft.	Grade	Joint	Depth Set (MD)
20"	14" O.D.				40' (GL)
11"	8-5/8"	24#	J-55	ST&C	0 – 2,016' (KB) est.
7-7/8"	4-1/2"	11.6#	N-80	LT&C	0 – 6800' (KB)

The surface casing will have guide shoe, 1 joint, insert float collar. Centralize the shoe joint with bowspring centralizers in the middle and top of the joint and the next 16 joints with bowspring centralizers on every other collar (8 centralizers total). Thread lock guide shoe.

Casing string(s) will be pressure tested to 0.22 psi/foot of casing string length or 1500 psi, whichever is greater (not to exceed 70% of the internal yield strength of the casing), after cementing and prior to drilling out from under the casing shoe.

**B. Casing Design Parameters:**

Depth (MD)	Casing	Collapse(psi)/SF	Burst (psi)/SF	Tension(mlbs)/SF
40' (GL)	14" OD			
2016' (KB)	8-5/8", 24#/ft, J55, STC	1370/1.52(a)	2950/3.28(b)	244/5.81(c)
6800' (KB)	4-1/2", 11.6#/ft, N-80, LTC	6350/1.80 (d)	7780/2.39 (e)	223/3.29(f)

- (a.) based on full evacuation of pipe with 8.6 ppg fluid on annulus
- (b.) based on 8.6 ppg gradient with no fluid on annulus
- (c.) based on casing string weight in 8.6 ppg mud
- (d.) based on full evacuation of pipe with 10.0 ppg fluid on annulus
- (e.) based on 9.2 ppg gradient, gas to surface, with no fluid on annulus, no gas gradient
- (f.) based on casing string weight in 9.2 ppg mud

**PROPOSED CEMENTING PROGRAM**

**Surface Casing (if well will circulate)-Cemented to surface**

CASING	SLURRY	FT. of FILL	CEMENT TYPE	SXS	EXCESS (%)	WEIGHT (ppg)	YIELD (ft <sup>3</sup> /sx)
8-5/8"	Lead	1516	Premium cement + 16% gel + 0.25 pps celloflake	138	25%	11.1	3.50
8-5/8"	Tail	500	Premium cement + 2% CaCl <sub>2</sub> + 0.25 pps celloflake	138	25%	15.8	1.15

A cement top job is required if cement fallback is greater than 10' below ground level. Top job (weight 15.8 ppg, yield 1.15 ft<sup>3</sup>/sx) cement will be premium cement w/ 3% CaCl<sub>2</sub>.+0.25 pps celloflake. Volume as required

**Surface Casing (if well will not circulate) - Cemented to surface**

CASING	SLURRY	FT. of FILL	CEMENT TYPE	SXS	EXCESS (%)	WEIGHT (ppg)	YIELD (ft <sup>3</sup> /sx)
8-5/8"	Lead	500	Premium cement + 2% CaCl <sub>2</sub> + 0.25 pps celloflake	138	25	15.8	1.15
8-5/8"	Top job	As req.	Premium cement + 3% CaCl <sub>2</sub> + 0.25 pps celloflake	As Req.		15.8	1.15

**Production Casing and Liner** - Cemented TD to 300' above base of surface casing

CASING	SLURRY	FT. of FILL	CEMENT TYPE	SXS	EXCESS (%)	WEIGHT (ppg)	YIELD (ft <sup>3</sup> /sx)
4-1/2"	Lead	647	Class "G" + 5% NaCl + 12% Gel + 0.25 pps celloflake + 0.2% antifoam + 0.25% fluid loss + 1% extender	58	25	11.0	3.3
4-1/2"	Tail	4437	50/50 POZ Class G + 2% gel + 1% CaCl <sub>2</sub> + 0.2% dispersant + 0.2% fluid loss + 0.1% antifoam	810	25	14.3	1.56

Cement volumes for the 4-1/2" Production Casing will be calculated to provide a top of cement to 300' above base of surface casing. Cement volumes are approximate and were calculated under the assumption that a gauge hole will be achieved. Actual cement volumes may vary due to variations in the actual hole size and will be determined by running a caliper log on the drilled hole. Actual cement types may vary due to hole conditions and cement contractor used.

All waiting on cement (WOC) times will be adequate to achieve a minimum of 500 psi compressive strength at the casing shoe prior to drilling out.

5. **Drilling Fluids (mud) Program:**

Interval (MD)	Mud Weight	Fluid Loss	Viscosity	Mud Type
0' - 2016' (KB)		No cntrl		Air/mist
2000'-3000' (KB)	8.4-8.6	No cntrl	28-36	Water
3000'-6800' (KB)	8.8-9.8	8 - 10 ml	32-42	Water/Gel

Sufficient mud material(s) to maintain mud properties, control lost circulation and contain a blowout will be available at the well site during drilling operations.

6. **Evaluation Program:**

Tests: No tests are currently planned.

Coring: No cores are currently planned.

Samples: No sampling is currently planned.

Logging

- Dual Induction – SFL /Gamma Ray/Caliper/SP/TDLT/CNL/ML  
TD to Base Surface Casing
- Cement Bond Log / Gamma Ray:  
TD to Base of Surface Casing or Top of Cement if below Base of Surface Casing

Stimulation: A stimulation or frac treatment will be designed for completion of this well based on openhole log analysis. The drill site, as approved, will be sufficient size to accommodate all completion activities.

**7. Abnormal Conditions:**

No abnormal temperatures or pressures are anticipated. No H<sub>2</sub>S has been encountered or known to exist from previous wells drilled to similar depths in the general area.

Maximum anticipated bottom hole pressure equals approximately 3,536 psi (calculated at 0.52psi/foot of hole) and maximum anticipated surface pressure equals approximately 2,040 psi (anticipated bottom hole pressure minus the pressure of a partially evacuated hole calculated at 0.22 psi/foot of hole).

**8. Anticipated Starting Dates:**

- Anticipated Commencement Date- Within one year of APD issue.
- Drilling Days- Approximately 10 days
- Completion Days - Approximately 10 days
- Anticipate location construction within 30 days of permit issue.

**9. Variances:**

None anticipated

**10. Other:**

A Cultural Resource Inventory and Paleontology reconnaissance shall be conducted for the well location, access route and pipeline. The reports shall be submitted to the Division of Oil, Gas and Mining and the School and Institutional Trust lands Administration upon their receipt.

Single Shot directional surveys will be dropped every 2000 feet to monitor hole angle.

**ENDURING RESOURCES**  
**Sand Wash 12-22-44-32**  
**Section 32, T12S, R22E, S.L.B.&M.**

PROCEED IN A WESTERLY DIRECTION FROM VERNAL, UTAH ALONG U.S. HIGHWAY 40 APPROXIMATELY 14 MILES TO THE JUNCTION OF STATE HIGHWAY 88. EXIT LEFT AND PROCEED IN A SOUTHERLY DIRECTION ALONG STATE HIGHWAY 88 APPROXIMATELY 17 MILES TO OURAY, UTAH. FROM OURAY, PROCEED IN A SOUTHERLY DIRECTION ALONG THE SEEP RIDGE ROAD (COUNTY B ROAD 2810) APPROXIMATELY 29.4 MILES TO ITS INTERSECTION WITH THE BUCK CANYON ROAD (COUNTY B ROAD 5460). CONTINUE IN A SOUTHEASTERLY DIRECTION ALONG THE SEEP RIDGE ROAD APPROXIMATELY 2.5 TO ITS INTERSECTION WITH THE EAST SAND WASH ROAD (A CLASS D COUNTY ROAD). EXIT LEFT AND PROCEED IN A NORTHEASTERLY DIRECTION ALONG THE COUNTY D ROAD APPROXIMATELY 0.9 MILES TO THE PROPOSED ACCESS ROAD FOR THE 12-22-23-32 WELL PAD. FOLLOW ROAD FLAGS IN A NORTHWESTERLY DIRECTION APPROXIMATELY 0.2 MILES TO THE PROPOSED ACCESS ROAD. FOLLOW ROAD FLAGS IN A WESTERLY DIRECTION APPROXIMATELY 240 FEET TO THE PROPOSED LOCATION.

TOTAL DISTANCE FROM VERNAL, UTAH TO THE PROPOSED WELL LOCATION IS APPROXIMATELY 63.8 MILES IN A SOUTHEASTERLY DIRECTION.

# **Enduring Resources, LLC**

**Sand Wash 12-22-44-32**

SE-Se 32-12S-22E

Uintah County, Utah

State Lease: ML-47089

## **MULTI-POINT SURFACE USE & OPERATIONS PLAN**

### **1. Existing Roads:**

Directions to the Sand Wash 12-22-44-32 Well Pad

Proceed in a westerly direction from Vernal, Utah along U.S. Highway 40 approximately 14 miles to the junction of State Highway 88. Exit left and proceed in a southerly direction along State Highway 88 approximately 17 miles to Ouray, Utah. From Ouray, proceed in a southerly direction along the Seep Ridge Road (County B Road 2810) approximately 29.4 miles to its intersection with Buck Canyon Road (County B Road 5460). Continue in a southeasterly direction along the Seep Ridge Road approximately 2.5 to its intersection with the East Sand Wash Road (A Class D County Road). Exit left and proceed in a northeasterly direction along the County D Road. Approximately 0.9 miles to the proposed access road for the 12-22-23-32 Well Pad. Follow road flags in a northwesterly direction approximately 0.2 miles to the proposed access road. Follow road flags in a westerly direction approximately 240 feet to the proposed location.

### **2. Planned Access Roads:**

The proposed access road will be approximately 240 feet of new construction all on-lease. All off-lease access is on an existing county road (East Sand Wash Road).

**ALL NEW CONSTRUCTION IS ON SITLA LANDS.**

The proposed access road will be utilized to transport personnel, equipment and supplies to and from the proposed well site during drilling, completion and production operations. The road will be utilized year round.

The access road will be crowned 2% to 3%, ditched and constructed with a running surface of 18 feet and a maximum disturbed width of 30 feet right-of-way. Maximum grade of road is 5% or less. Graveling or capping the roadbed will be performed as necessary to provide a well constructed, safe road. No fence crossings, culverts, turnouts, cattle guards or major cuts and fills are required. Prior to construction or upgrading, the proposed road shall be cleared of any snow and allowed to dry completely.

Surface disturbance and vehicular traffic will be limited to the proposed location and proposed access route. Any additional area needed will be approved in advance. All construction shall be in conformance with the standards outlined in the BLM and Forest Service publication: Surface Operating Standards for Oil and Gas Exploration and Development. 1989.

The road surface and shoulders will be kept in a safe usable condition and will be maintained in accordance with the original construction standards. All drainage ditches will be kept clear and free flowing and will be maintained according to original construction standards. The access road surface will be kept free of trash during operations. All traffic will be confined to the approved disturbed surface. Road drainage crossings shall be designed so they will not cause siltation or accumulation of debris in the drainage crossing nor shall the drainages be blocked by the road bed. Erosion of drainage ditches by runoff water shall be prevented by diverting water off at frequent intervals by means of cutouts. Upgrading shall not be allowed during muddy conditions. Should mud holes develop, they shall be filled in and detours around them avoided. When snow is removed from the road during the winter months, the snow shall be pushed outside of the borrow ditches and the turnouts kept clear so that snowmelt will be channeled away from the road.

3. **Location of Existing Wells within a One-Mile radius (See "Topo" Map "C" attached):**

The following wells are wells located within a one (1) mile or greater radius of the proposed location.

- |    |       |  |
|----|-------|--|
| a. | None: | Water Wells:   |
| b. | None: | Injection Wells:                                       |
| c. | None: | Producing Wells:                                       |
| d. | None: | Drilling Wells:  |
| e. | None: | Shut-in Wells:   |
| f. | None: | Temporarily Abandoned Wells:                           |
| g. | None: | Disposal Wells:  |
| h. | None: | Abandoned Wells:                                       |
| i. | None: | Dry Holes:   |
| j. | None: | Observation Wells:                                     |
| k. | (1):  | Pending (staked) Wells:                                |
|    |       | i. Enduring has one other well staked in this section. |

4. **Location of Existing and/or Proposed Facilities:**

All production facilities will be located on the disturbed portion of the well pad and at a minimum of 25 feet from the toe of the back slope or the top of the fill slope.

A dike will be constructed completely around those production facilities which contain fluids (i.e. production tanks, produced water tanks and/or heater treater). These dikes will be constructed of compacted subsoil, be impervious, hold 100% of the capacity of the largest tank and be independent of the back cut.

All permanent (on site for six months or longer) above the ground structures constructed or installed, including pumping units, will be painted a flat, non-reflective, earth tone color to match one of the standard environmental colors, as determined by the Rocky Mountain Five State Inter-Agency Committee

All facilities will be painted within 6 months of installation. The color shall be designated by DOG&M and SITLA. Facilities required to comply with the Occupational Safety and Health Act (OSHA) will be excluded.

Any necessary pits will be properly fenced to protect livestock and prevent wildlife entry.

Gas Gathering Pipeline for this well will be:

240'	Surface Pipeline	On-Lease	SITLA
-0-	Surface Pipeline	Off-Lease	n/a

If this well is capable of economic production, a 4" (or less) steel surface gas gathering line and related equipment shall be installed. The surface gas gathering line shall be in use year round. A total of approximately less than 240 feet of surface gas gathering pipeline shall be laid on the surface to minimize surface disturbance:

The proposed pipeline will begin at the well site; and be laid on the surface next to the new access road to tie-in to a steel surface pipeline that is located next to the county road.

The meter run will be housed. The gas gathering line will be buried or anchored down from the wellhead to the meter.

Upon plugging and abandonment, the gas gathering line will be removed and the disturbed area will be re-contoured and restored as near as practical to the original condition. If necessary, re-seeding operations will be performed after completion of other reclamation operations.

##### 5. Location and Type of Water Supply:

Whenever practical, water will be obtained from Enduring Resources LLC Water Right Number 49-2215 or Water Right Number 49-2216 (\*See Townships of permitted Use below). If those sources are not available, a new water source shall be submitted prior to commencing operations. (These permits have one-year terms and then must be renewed)

\*Enduring Water Permits' Townships of Use:

T10S-R22E	T11S-R22E	T12S-R22E
T10S-R23E	<b>T11S-R23E</b>	T12S-R23E
T10S-R24E	T11S-R24E	T12S-R24E

Water will be hauled to the location over the roads marked on "Topo" Maps "A" and "B."

No water well is to be drilled on this lease.

**6 Source of Construction Materials:**

Surface and subsoil materials in the immediate area will be utilized for location and access road construction.

Any gravel will be obtained from a commercial source; however, gravel sized rock debris associated with location and access road construction may be used as access road surfacing material.

**7. Methods of Handling Waste Materials:**

Drill cuttings will be contained and buried in the reserve pit.

Drilling fluids, including salts and chemicals, will be contained in the reserve pit will be removed and disposed of at an approved waste disposal facility within 120 days after drilling is terminated.

The reserve pit will be constructed on the location and will not be located within natural drainage, where a flood hazard exists or surface runoff will destroy or damage the pit walls. The reserve pit will be constructed so that it will not leak, break or allow discharge of liquids.

The reserve pit will be lined with ¼ felt and a minimum of 16 mm plastic with sufficient bedding used to cover any rocks. The liner will overlap the pit walls and be covered with dirt and/or rocks to hold it in place. No trash or scrap that could puncture the will be disposed of in the pit.

A chemical portable toilet will be furnished with the drilling rig. The toilet will be replaced periodically utilizing a licensed contractor to transport by truck the portable chemical toilet so that its contents can be delivered to the Vernal Wastewater Treatment Facility in accordance with state and county regulations.

Garbage, trash and other waste materials will be collected in a portable, self-contained, fully enclosed trash cage during operations. No trash will be burned on location.

All debris and other waste material not contained in the trash cage will be cleaned up and removed from the location immediately after removal of the drilling rig.

Any open pits will be fenced during the operations. The fencing will be maintained until such time as the pits are backfilled.

No chemicals subject to reporting under SARA Title III (hazardous materials) in an amount greater than 10,000 pounds will be used, produced, stored, transported or disposed of in association with the drilling, completion or testing of this well. Furthermore, no extremely hazardous substances, as defined in 40 CFR 355, in threshold planning quantities, will be used, produced, stored, transported or disposed of in association with the drilling, completion or testing of this well.

Produced oil will be stored in an oil tank and then hauled by truck to a crude purchaser facility. Any produced water from the proposed well will be contained in a water tank and will then be hauled by truck to an approved disposal site.

**8. Ancillary Facilities:**

During drilling operations, approximately 20 days, the site will be a manned camp. Three or four additional trailers will be on location to serve as the crews' housing and eating facilities. These will be located on the perimeter of the pad site within the topsoil stockpiles. Refer to Sheet 4.

**9. Well Site Layout: (Refer to Sheets #2, #3, and #4)**

The attached Location Layout Diagrams described drill pad cross-sections, cuts and fills and locations of the mud tanks, reserve pit, flare pit, pipe racks, trailer parking, spoil dirt stockpile(s) and surface material stockpiles(s).

Please see the attached diagram for rig orientation and access roads.

The top soil will be windrowed rather than piled. It will be reseeded and track walker at the time the location is constructed. Seeding will be with the determined during the onsite. (Refer to "Seed Mixture for Windrowed Top Soil Will included:" following herein.

The top soil removed from the pit area will be store separately and will not be reseeded until the pit is reclaimed.

All pits shall be fence to the following minimum standards:

- a. 39 inch net wire shall be used with at least one strand of barbed wire on top of the net wire. Barbed wire is not necessary if pipe or some type of reinforcement rod is attached to the top of the entire fence.
- b. The net wire shall be no more than 2 inches above the ground. The barbed wire shall be 3 inches over the new wire. Total height of the fence shall be at least 42 inches.
- c. Corner posts shall be cemented and/or braced in such a manner to keep the fence tight at all times.
- d. Standard steel, wood or pipe posts shall be used between the corner braces. Maximum distance between any two fence posts shall be no greater than 16 feet.
- e. All wire shall be stretched by, using a stretching device, before it is attached to corner posts.
- f. The reserve pit fencing will be on three sides during drilling operations and on the fourth side when the rig moves off location. Pits will be fenced and maintained until cleanup.
- g. Location size may change prior to drilling the well due to the current rig availability. If the proposed location is not large enough to accommodate the drilling, the location will be re-surveyed and a Form 9 will be submitted.

**10. Plans for Surface Reclamation:****Producing Location:**

- a. Immediately upon well completion the location and surrounding area will be cleared of all unused tubing, equipment, materials, trash and debris not required for production.
- b. Immediately upon well completion any hydrocarbons in the pit shall be removed in accordance with 40CFR 3162.7.
- c. Before any dirt work associated with location restoration takes place, the reserve pit shall be as dry as possible. All debris in it will be removed. Other waste and spoil materials will be disposed of immediately upon completion of operations.
- d. The reserve pit **and** that portion of the location not needed for production facilities/operations will be re-contoured to the approximated natural contours. The reserve pit will be reclaimed within 90 days from the date of well completion, weather permitting.
- e. To prevent surface water(s) from standing (ponding) on the reclaimed reserve pit area, final reclamation of the reserve pit will consist of "mounding" the surface 3 feet above surrounding round surface to allow the reclaimed pit area to drain effectively.
- f. Upon completion of back filling, leveling and re-contouring, the stockpiled topsoil will be spread evenly over the reclaimed area(s).

**Dry Hole/Abandoned Location:**

- i. Abandoned well sites, roads and other disturbed areas will be restored as nearly as practical to their original condition. Where applicable, these conditions include the re-establishment of irrigation systems, the re-establishment of appropriate soil conditions and re-establishment of vegetation as specified.
- ii. All disturbed surfaces will be re-contoured to the approximated natural contours with reclamation of the well pad and access road to be performed as soon as practical after final abandonment. If necessary, re-seeding operations will be performed after completion of other reclamation operations.

**Seed Mixture for Windrowed Top Soil Will Included:**

To be provided by the DOG&M and/or SITLA.

**11. Surface Ownership: Location, Access and Pipeline Route:**

Wellsite: SITLA

Access: SITLA

Pipeline: SITLA

**12. Other Information****On-site Inspection for Location, Access and Pipeline Route:**

The on-site will be scheduled by SITLA and DOG&M.

**Special Conditions of Approval:**

- Tanks and Production Equipment shall be painted Dark Olive Black.
- Surface Gathering Pipeline shall be 4" or less

**Archeology:**

- a. A Cultural Resource Inventory Report is pending and to be prepared by Montgomery Archaeological Consultants.

**Paleontology:**

- a. A Paleontology Reconnaissance Report is pending and to be prepared by Intermountain Paleo-Consulting.

If, during operations, any archaeological or historical sites, or any objects of antiquity (subject to the Antiquities Act of June 8, 1906) are discovered, all operations which would affect such sites will be suspended and the discovery reported promptly to the surface management agency.

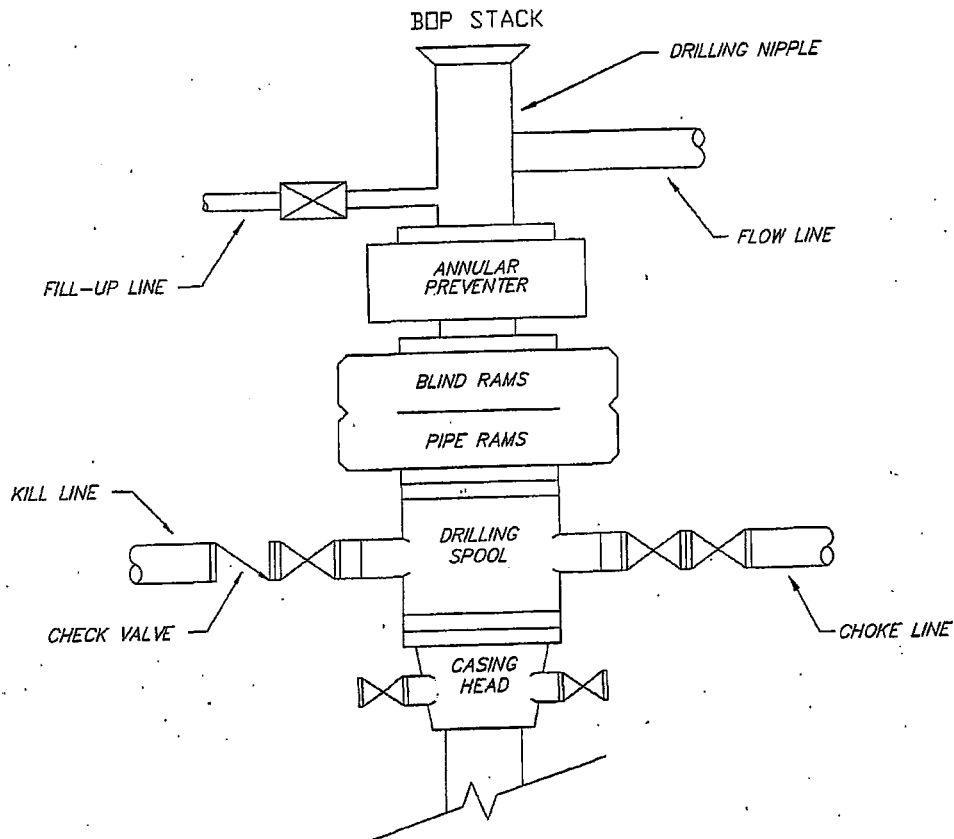
**13. Lessee's or Operator's Representatives:****Representatives:**

Alvin R. (Al) Arlian  
Landman – Regulatory Specialist  
Enduring Resources, LLC  
475 17<sup>th</sup> Street, Suite 1500  
Denver, Colorado 80202  
Office Tel: 303-350-5114  
Fax Tel: 303-573-0461  
[aarlian@enduringresources.com](mailto:aarlian@enduringresources.com)

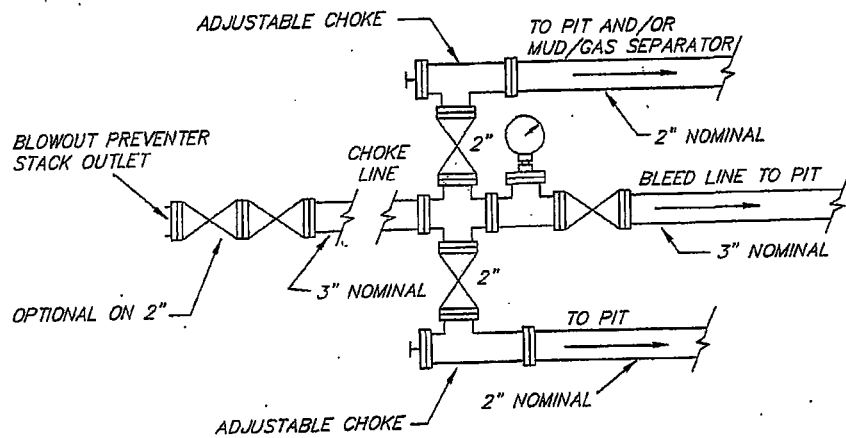
Teme Singleton  
Drilling Engineer  
Enduring Resources, LLC  
475 17<sup>th</sup> Street, Suite 1500  
Denver, Colorado 80202  
Office Tel: 303-573-5711  
Fax Tel: 303-573-0461  
[tsingleton@enduringresources.com](mailto:tsingleton@enduringresources.com)

# ENDURING RESOURCES, LLC

## TYPICAL 3,000 p.s.i. BLOWOUT PREVENTER SCHEMATIC



## TYPICAL 3,000 p.s.i. CHOKE MANIFOLD SCHEMATIC



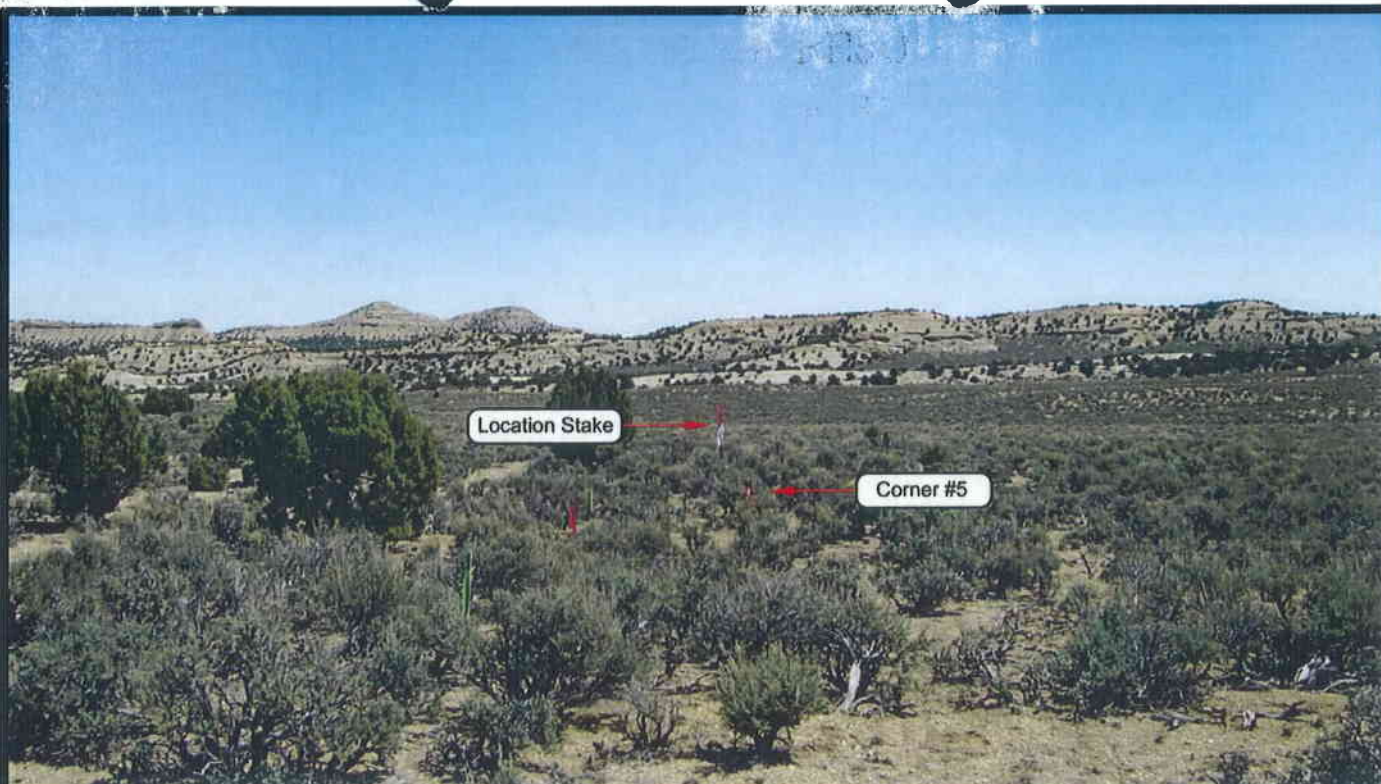


PHOTO VIEW: FROM CORNER #5 TO LOCATION STAKE

CAMERA ANGLE: NORTHEASTERLY

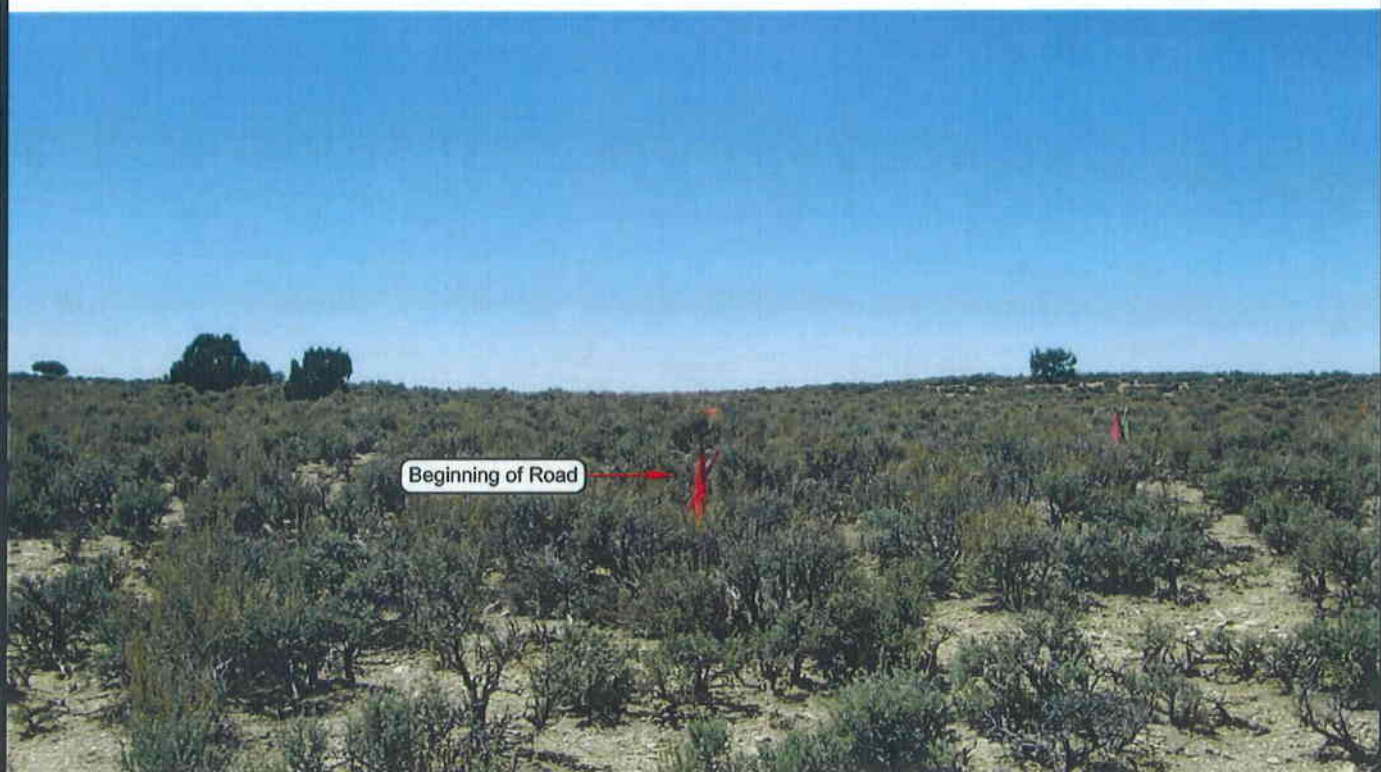


PHOTO VIEW: FROM BEGINNING OF PROPOSED ROAD

CAMERA ANGLE: WESTERLY

## ENDURING RESOURCES

**Sand Wash 12-22-44-32**  
**SECTION 32, T12S, R22E, S.L.B.&M.**

## LOCATION PHOTOS

TAKEN BY: K.R.K.

DRAWN BY: B.J.Z.

DATE TAKEN: 05-15-06

DATE DRAWN: 05-30-06

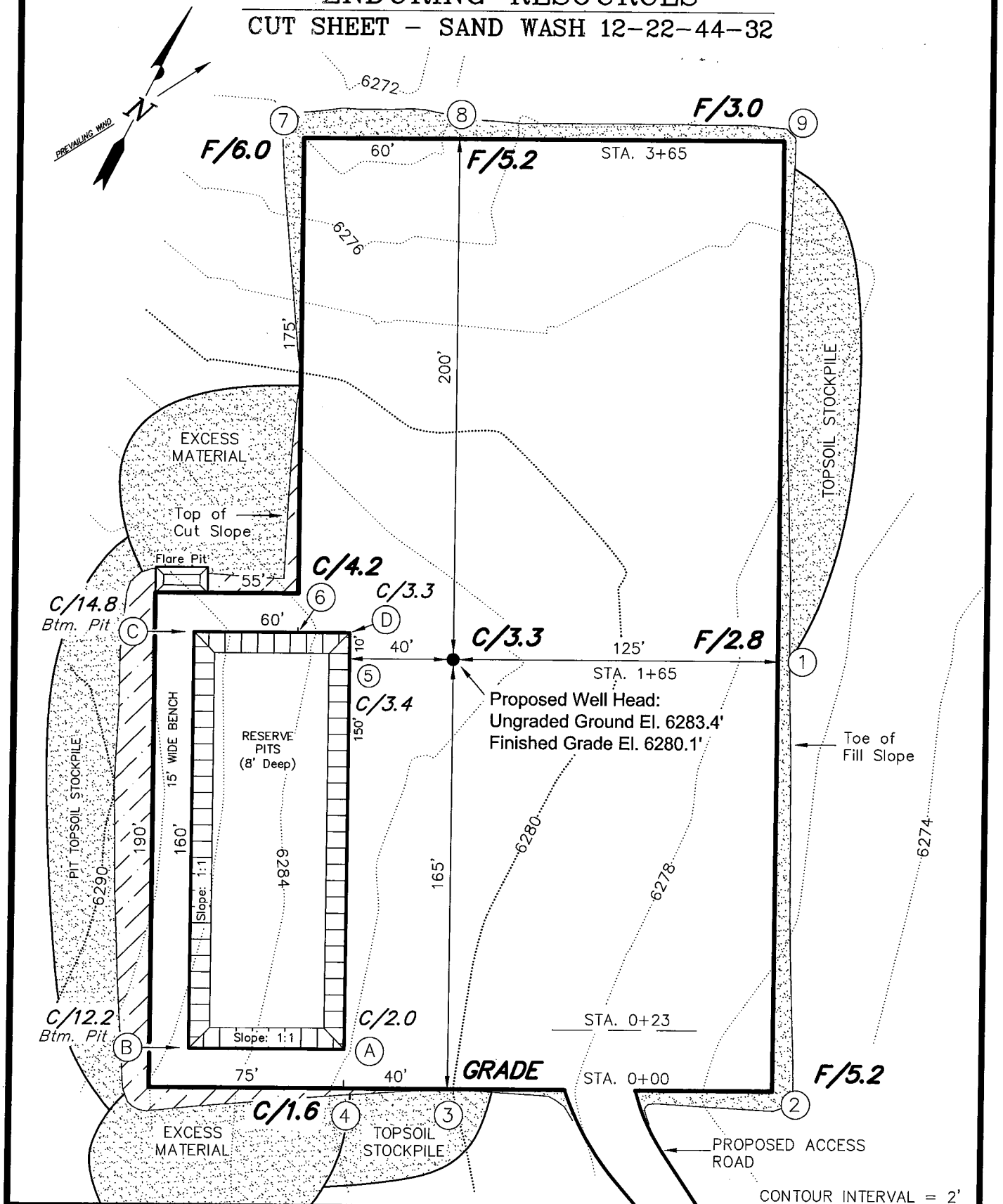
REVISED:

**Timberline Land Surveying, Inc.**  
 38 West 100 North Vernal, Utah 84078  
 (435) 789-1365

SHEET  
 1  
 OF 10

# ENDURING RESOURCES

## CUT SHEET - SAND WASH 12-22-44-32

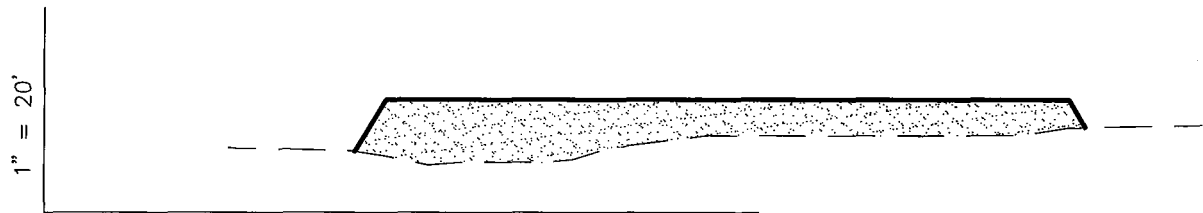


CONTOUR INTERVAL = 2'

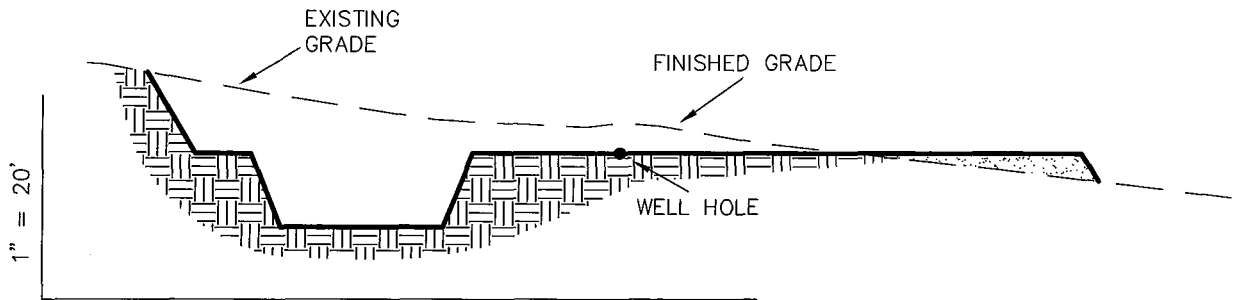
Section 32, T12S, R22E, S.L.B.&M.		Qtr/Qtr Location: SE SE	Footage Location: 801' FSL & 512' FEL
Date Surveyed: 05-15-06	Date Drawn: 05-23-06	Date Last Revision:	<b>Timberline</b> (435) 789-1365
Surveyed By: K.R.K.	Drawn By: M.W.W.	Scale: 1" = 50'	<b>Land Surveying, Inc.</b>
38 WEST 100 NORTH VERNAL, UTAH 84078			<b>SHEET 3 OF 10</b>

# ENDURING RESOURCES

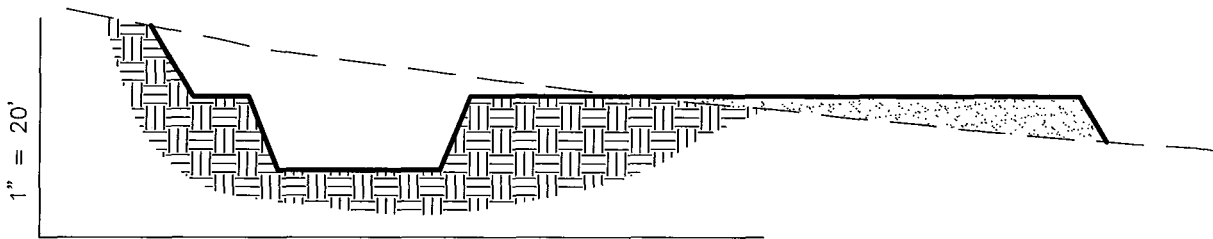
## CROSS SECTIONS - SAND WASH 12-22-44-32



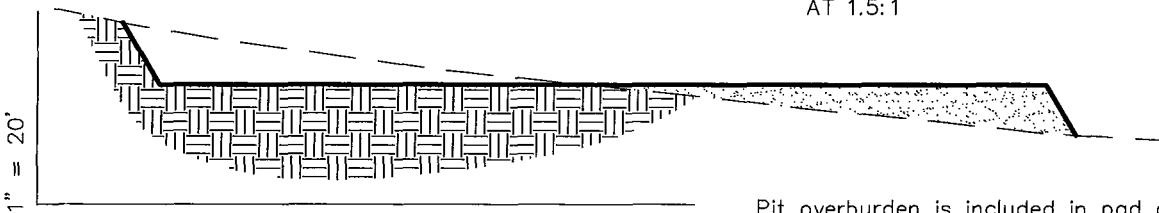
1" = 50' STA. 3+65



1" = 50' STA. 1+65



1" = 50' STA. 0+23



1" = 50' STA. 0+00

NOTE:  
UNLESS OTHERWISE NOTED  
ALL CUT/FILL SLOPES ARE  
AT 1.5:1

Pit overburden is included in pad cut.

### REFERENCE POINTS

175' NORTHEASTERLY = 6274.8'  
225' NORTHEASTERLY = 6272.4'  
250' NORTHWESTERLY = 6273.5'  
300' NORTHWESTERLY = 6270.5'

### ESTIMATED EARTHWORK QUANTITIES (No shrink or swell adjustments have been used) (Expressed in Cubic Yards)

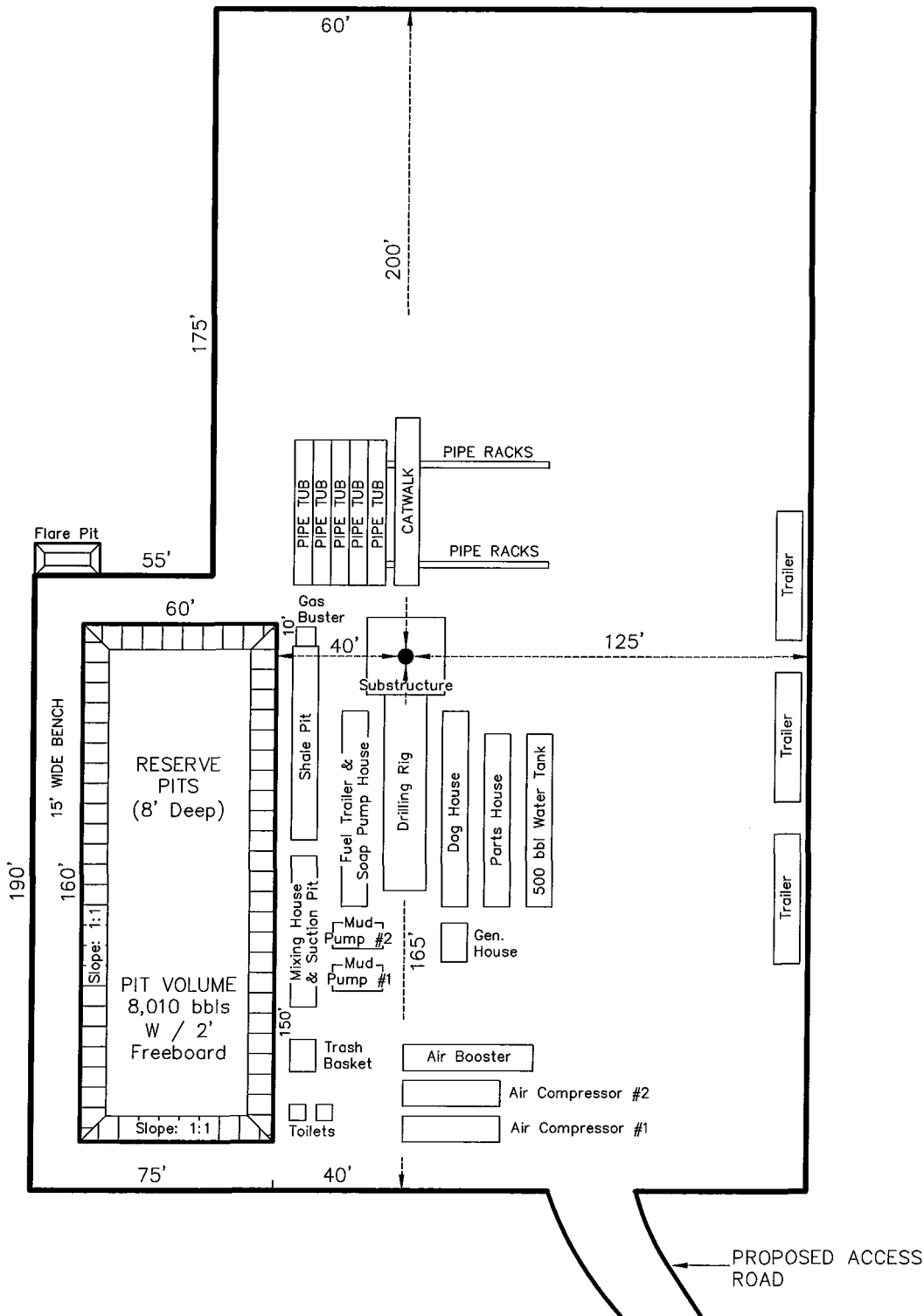
ITEM	CUT	FILL	6" TOPSOIL	EXCESS
PAD	3,420	4,590	Topsoil is not included in Pad Cut	-1,170
PIT	2,340	0		2,340
TOTALS	5,760	4,590	1,440	1,170

Excess Material after Pit Rehabilitation = 0 Cu. Yds.

Section 32, T12S, R22E, S.L.B.&M.		Qtr/Qtr Location: SE SE	Footage Location: 801' FSL & 512' FEL
Date Surveyed: 05-15-06	Date Drawn: 05-23-06	Date Last Revision:	<b>Timberline</b> (435) 789-1365
Surveyed By: K.R.K.	Drawn By: M.W.W.	Scale: 1" = 50'	<b>Land Surveying, Inc.</b>
38 WEST 100 NORTH VERNAL, UTAH 84078			<b>SHEET 4 OF 10</b>

# ENDURING RESOURCES

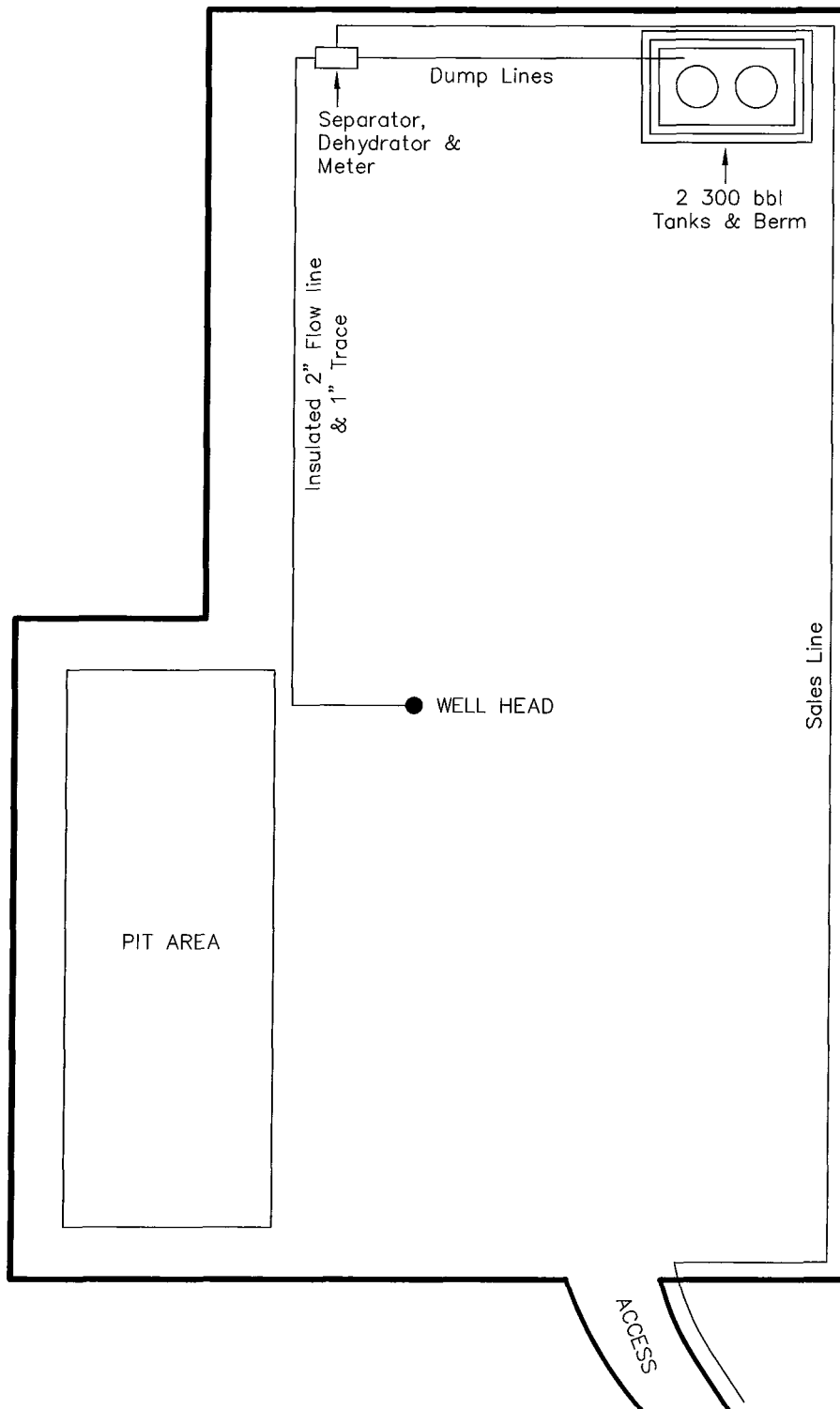
TYPICAL RIG LAYOUT - SAND WASH 12-22-44-32



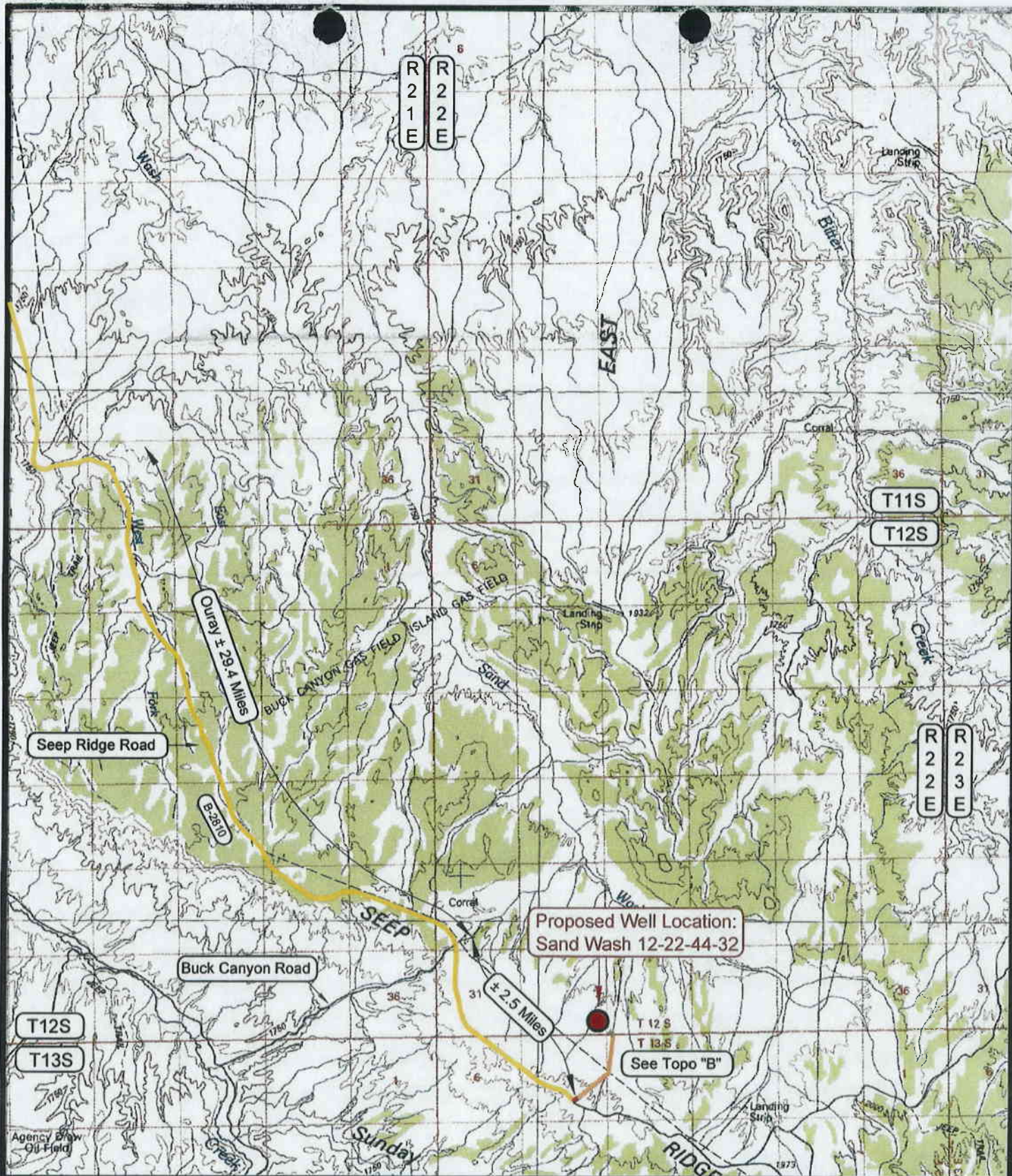
Section 32, T12S, R22E, S.L.B.&M.		Qtr/Qtr Location: SE SE	Footage Location: 801' FSL & 512' FEL
Date Surveyed: 05-15-06	Date Drawn: 05-23-06	Date Last Revision:	<b>Timberline</b> (435) 789-1365
Surveyed By: K.R.K.	Drawn By: M.W.W.	Scale: 1" = 50'	<b>Land Surveying, Inc.</b>
38 WEST 100 NORTH VERNAL, UTAH 84078			<b>SHEET 5 OF 10</b>

# ENDURING RESOURCES

TYPICAL PRODUCTION LAYOUT – SAND WASH 12-22-44-32



Section 32, T12S, R22E, S.L.B.&M.		Qtr/Qtr Location: SE SE	Footage Location: 801' FSL & 512' FEL
Date Surveyed: 05-15-06	Date Drawn: 05-23-06	Date Last Revision:	<b>Timberline</b> (435) 789-1365
Surveyed By: K.R.K.	Drawn By: M.W.W.	Scale: 1" = 50'	<b>Land Surveying, Inc.</b>
38 WEST 100 NORTH VERNAL, UTAH 84078			<b>SHEET 6 OF 10</b>



#### LEGEND

- PROPOSED ACCESS ROAD  
 --- = SUBJECT WELL  
 --- = OTHER WELLS  
 --- = EXISTING ROAD  
 --- = EXISTING ROAD (TO BE IMPROVED)

(B-5460) = COUNTY ROAD CLASS & NUMBER

#### TOPOGRAPHIC MAP "A"

SCALE: 1:100,000

DRAWN BY: B.J.Z.

DATE SURVEYED: 05-15-06

DATE DRAWN: 05-30-06

REVISED:

#### ENDURING RESOURCES

**Sand Wash 12-22-44-32**  
**SECTION 32, T12S, R22E, S.L.B.&M.**

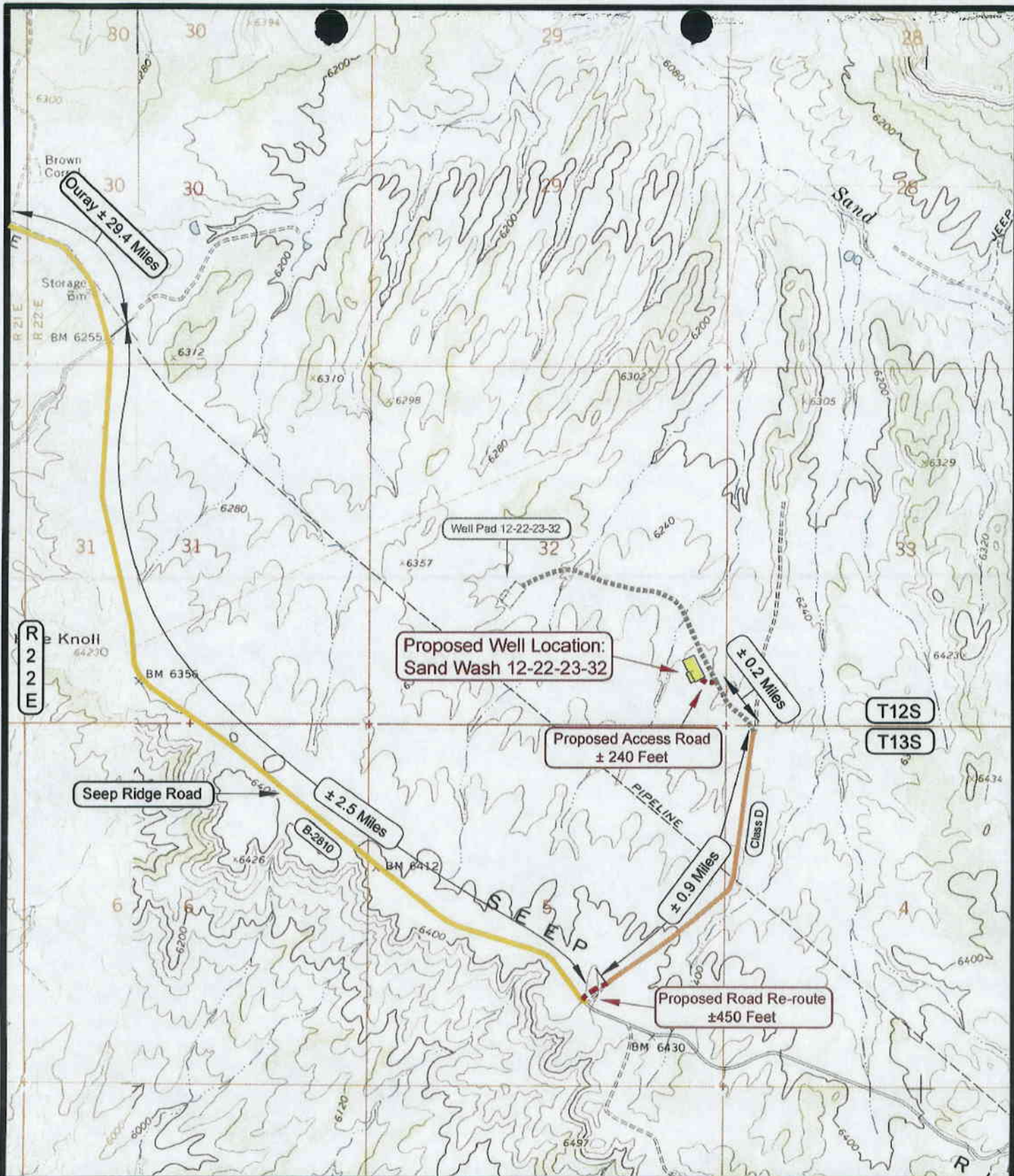
**Timberline Land Surveying, Inc.**

38 West 100 North Vernal, Utah 84078  
 (435) 789-1365

SHEET

7

OF 10



# LEGEND

- PROPOSED ACCESS ROAD
- = SUBJECT WELL
- = OTHER WELLS
- = EXISTING ROAD
- = EXISTING ROAD (TO BE IMPROVED)
- (B-5460) = COUNTY ROAD CLASS & NUMBER
- = LEASE LINE AND / OR PROPERTY LINE

## TOPOGRAPHIC MAP "B"

SCALE: 1" = 2000'

DRAWN BY: B.J.Z.

DATE SURVEYED: 05-15-06

DATE DRAWN: 05-30-06

REVISED:

## ENDURING RESOURCES

**Sand Wash 12-22-44-32**  
**SECTION 32, T12S, R22E, S.L.B.&M.**

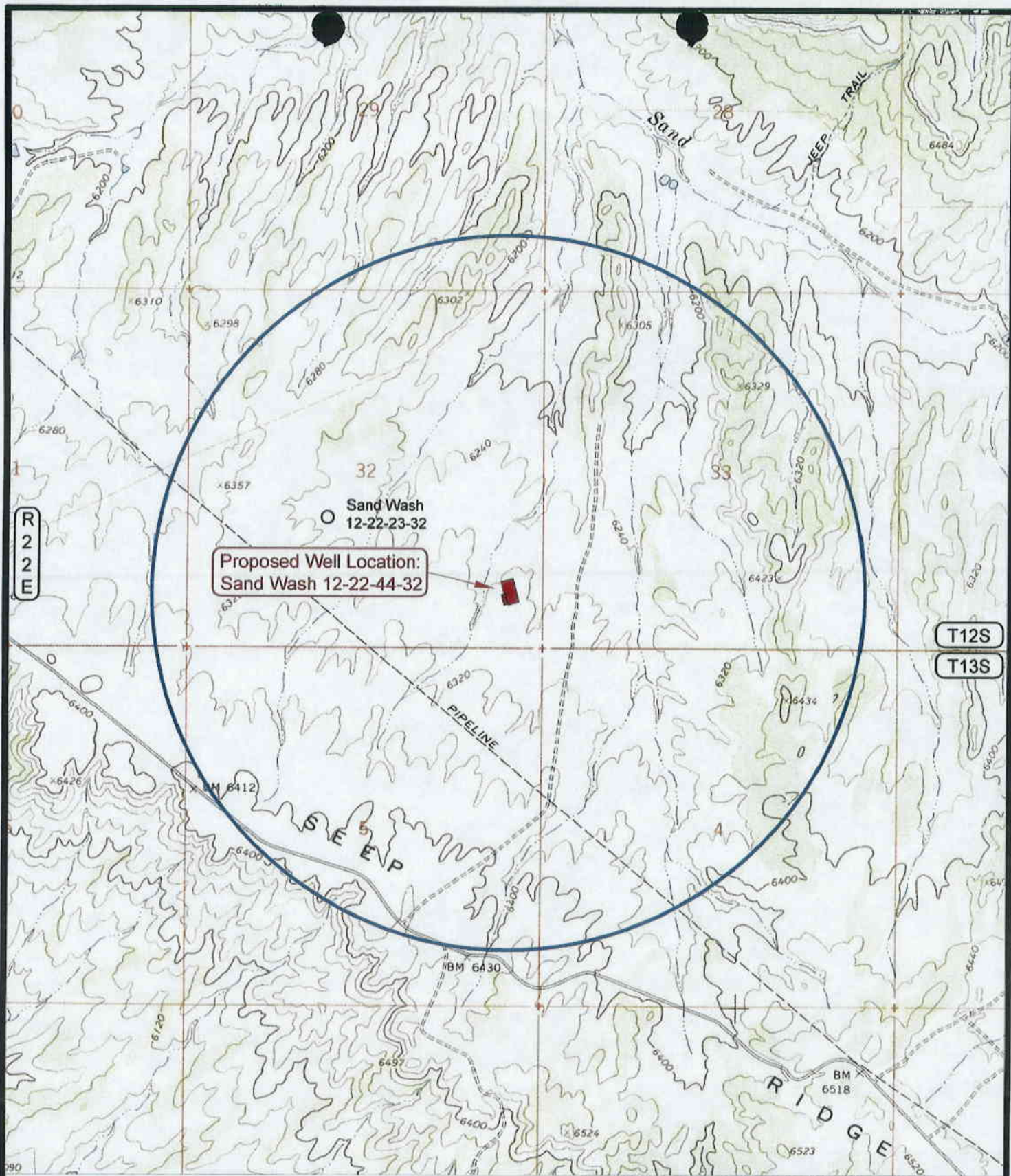
**Timberline Land Surveying, Inc.**

38 West 100 North Vernal, Utah 84078  
 (435) 789-1365









**SHEET**

**8**

**OF 10**



### LEGEND

- |   |                  |   |                              |
|---|------------------|---|------------------------------|
|  | = DISPOSAL WELL  |  | = WATER WELL                 |
|  | = PRODUCING WELL |  | = ABANDONED WELL             |
|  | = SHUT IN WELL   |  | = TEMPORARILY ABANDONED WELL |
|  | = PROPOSED WELL  |  | = ABANDONED LOCATION         |

TOPOGRAPHIC MAP "C"

DATE SURVEYED: 05-15-06

DATE DRAWN: 05-30-06

SCALE: 1" = 2000'

DRAWN BY: BJ.Z

REVISÉ:

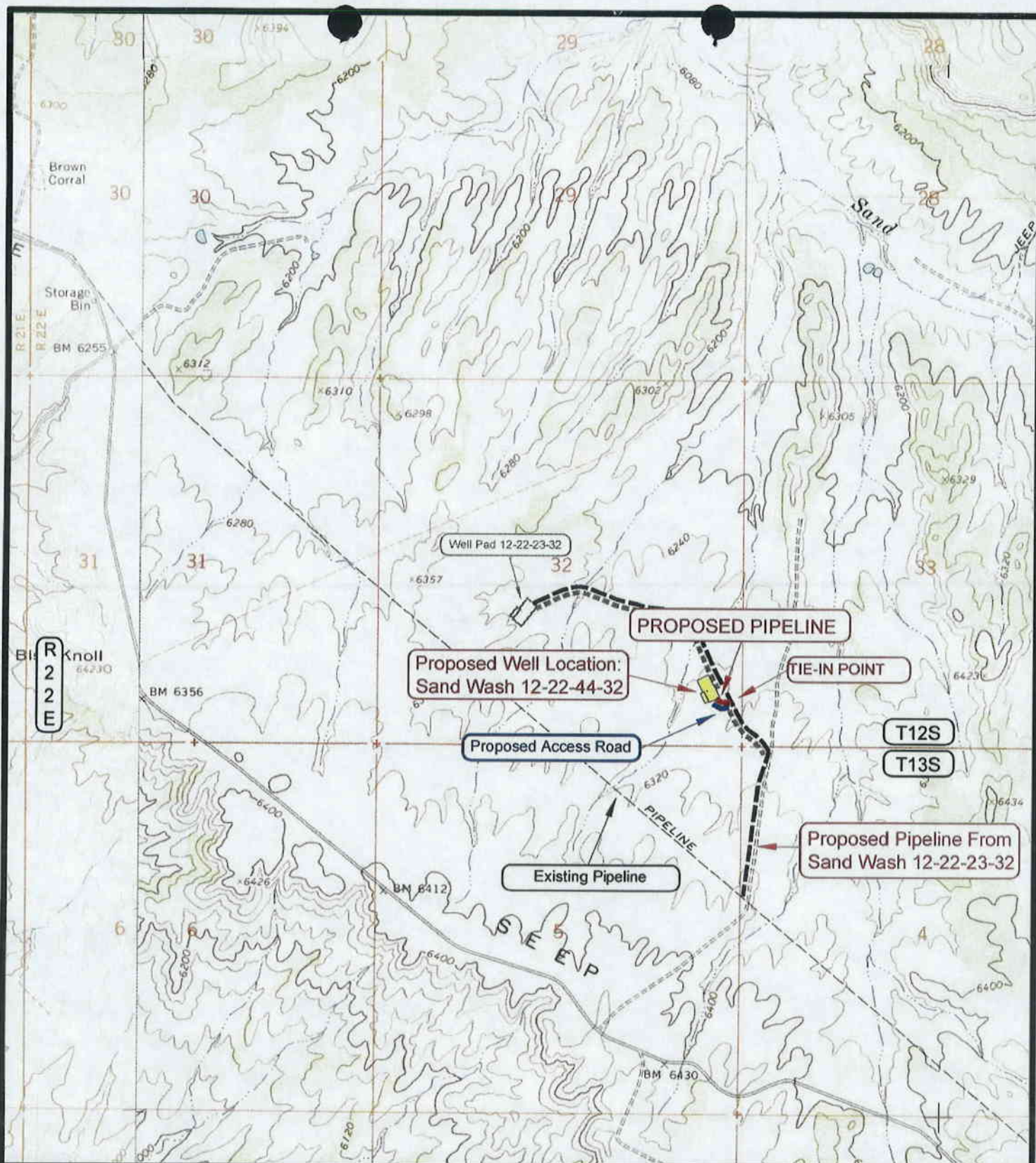
## ENDURING RESOURCES

**Sand Wash 12-22-44-32**  
**SECTION 32, T12S, R22E, S.L.B.&M.**

**Timberline Land Surveying, Inc.**  
38 West 100 North Vernal, Utah 84078  
(435) 789-1365

SHEET  
9  
OF 10





**APPROXIMATE PIPELINE LENGTH = 240 FEET**

#### LEGEND

- = PROPOSED PIPELINE
- = OTHER PIPELINE
- = PROPOSED ACCESS ROAD
- = SUBJECT WELL
- = OTHER WELLS
- = LEASE LINE AND / OR PROPERTY LINE

**TOPOGRAPHIC MAP "D"**

DATE SURVEYED: 05-15-06

DATE DRAWN: 05-30-06

SCALE: 1" = 2000'

DRAWN BY: B.J.Z.

REVISED:

#### ENDURING RESOURCES

**Sand Wash 12-22-44-32**  
**SECTION 32, T12S, R22E, S.L.B.&M.**

**Timberline Land Surveying, Inc.**  
 38 West 100 North Vernal, Utah 84078  
 (435) 789-1365

**SHEET**  
**10**  
**OF 10**

**WORKSHEET**  
**APPLICATION FOR PERMIT TO DRILL**

APD RECEIVED: 06/12/2006

API NO. ASSIGNED: 43-047-38286

WELL NAME: SAND WASH 12-22-44-32

OPERATOR: ENDURING RESOURCES, LLC ( N2750 )

PHONE NUMBER: 303-350-5114

CONTACT: AL ARLIAN

PROPOSED LOCATION:

SESE 32 120S 220E

SURFACE: 0801 FSL 0512 FEL

BOTTOM: 0801 FSL 0512 FEL

COUNTY: UINTAH

LATITUDE: 39.72512 LONGITUDE: -109.4704

UTM SURF EASTINGS: 631091 NORTHINGS: 4398157

FIELD NAME: WILDCAT ( 1 )

INSPECT LOCATN BY: / /

Tech Review	Initials	Date
Engineering	DED	7/20/06
Geology		
Surface		

LEASE TYPE: 3 - State

LEASE NUMBER: ML-47089

SURFACE OWNER: 3 - State

PROPOSED FORMATION: MVRD

COALBED METHANE WELL? NO

RECEIVED AND/OR REVIEWED:

☒ Plat  
☒ Bond: Fed[] Ind[] Sta[] Fee[]  
(No. RLB0008031 )  
☒ Potash (Y/N)  
☒ Oil Shale 190-5 (B) or 190-3 or 190-13  
☒ Water Permit  
(No. 49-2215 )  
☒ RDCC Review (Y/N)  
(Date: 07/05/2006 )  
☒ Fee Surf Agreement (Y/N)  
☒ Intent to Commingle (Y/N)

LOCATION AND SITING:

\_\_\_ R649-2-3.  
Unit: \_\_\_\_\_  
☒ R649-3-2. General  
Siting: 460 From Qtr/Qtr & 920' Between Wells  
\_\_\_ R649-3-3. Exception  
\_\_\_ Drilling Unit  
Board Cause No: \_\_\_\_\_  
Eff Date: \_\_\_\_\_  
Siting: \_\_\_\_\_  
\_\_\_ R649-3-11. Directional Drill

COMMENTS:

*Needs Permit (06-30-2006)*

STIPULATIONS:

*1-Spacing Strip  
2- STATEMENT OF BASIS  
3- Surface Csg Cart strip*

T12S R22E

32

SAND WASH  
12-22-23-32

SAND WASH  
12-22-44-32

T13S R22E

OPERATOR: ENDURING RES LLC (N2750)

SEC: 32 T. 12S R. 22E

FIELD: WILDCAT (001)

COUNTY: UINTAH

SPACING: R649-3-2 / GENERAL SITING

#### Field Status

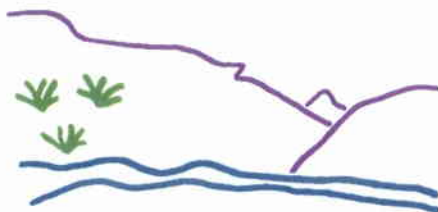
- ABANDONED
- ACTIVE
- COMBINED
- INACTIVE
- PROPOSED
- STORAGE
- TERMINATED

#### Unit Status

- EXPLORATORY
- GAS STORAGE
- NF PP OIL
- NF SECONDARY
- PENDING
- PI OIL
- PP GAS
- PP GEOTHERML
- PP OIL
- SECONDARY
- TERMINATED

#### Wells Status

- GAS INJECTION
- GAS STORAGE
- LOCATION ABANDONED
- NEW LOCATION
- PLUGGED & ABANDONED
- PRODUCING GAS
- PRODUCING OIL
- SHUT-IN GAS
- SHUT-IN OIL
- TEMP. ABANDONED
- TEST WELL
- WATER INJECTION
- WATER SUPPLY
- WATER DISPOSAL
- DRILLING



*Utah Oil Gas and Mining*



PREPARED BY: DIANA WHITNEY  
DATE: 20-JUNE-2006

**DIVISION OF OIL, GAS AND MINING  
APPLICATION FOR PERMIT TO DRILL  
STATEMENT OF BASIS**

**OPERATOR:** ENDURING RESOURCES, LLC.  
**WELL NAME & NUMBER:** Sand Wash 12-22-44-32  
**API NUMBER:** 43-047-38286  
**LOCATION:** 1/4, 1/4 SE/SE sec: 32 TWP: 12S RNG: 22E 512' FEL 801 FSL

**Geology/Ground Water:**

Enduring proposes to set 2,000 feet of surface casing cemented to the surface. The base of the moderately saline water is estimated at 3,300 feet. A search of Division of Water Rights records shows no water wells within a 10,000 foot radius of the center of section 32. The surface formation at this location is the Uinta/Green River Formation transition. The Uinta Formation is made up of discontinuous sands interbedded with shales and are not expected to produce prolific aquifers. The Green River Formation is made up of interbedded limestones, shales and sandstones. Fresh water aquifers can be found in the Green River Formation and should be protected. The proposed surface casing should adequately protect any potentially useable aquifers. Production casing cement should be brought up above the base of the moderately saline groundwater to isolate it from fresher waters up hole.

**Reviewer:** Brad Hill **Date:** 07-11-06

**Surface:**

The predrill investigation of the surface was performed on June 30, 2006. This site is on State surface, with State minerals, and appears to be the best site for a location in the immediate area. No significant stability problems are anticipated with the construction, drilling and operation of the well as proposed.

Ben Williams with UDWR and Ed Bonner and Jim Davis with SITLA were invited to this investigation on 06/22/2006. Mr. Davis attended. Mr. Williams said he had a meeting that day and would not be able to attend..

**Reviewer:** Floyd Bartlett **Date:** July 10, 2006

**Conditions of Approval/Application for Permit to Drill:**

1. A synthetic liner with a minimum thickness of 16 mils with a felt subliner shall be properly installed and maintained in the reserve pit.

**ON-SITE PREDRILL EVALUATION**  
**Division of Oil, Gas and Mining**

**OPERATOR:** ENDURING RESOURCES, LLC.

**WELL NAME & NUMBER:** Sand Wash 12-22-44-32

**API NUMBER:** 43-047-38286

**LEASE:** UTU-47089      **FIELD/UNIT:** Undesignated

**LOCATION:** 1/4, 1/4 SE/SE sec: 32 TWP: 12S RNG: 22E 512' FEL 801 FSL

**LEGAL WELL SITING:** 460 F SEC. LINE; 460 F 1/4, 1/4 LINE; 920 F ANOTHER WELL.

**GPS COORD (UTM):** 631085 X 4398164 Y      **SURFACE OWNER:** STATE OF UTAH

**PARTICIPANTS**

Floyd Bartlett (DOGM), Doug Hammond, (Enduring Resources), Jim Davis (SITLA), Mike Stewart (Ponderosa Construction- Dirt Contractor). Kolby Kay (Timberline Land Surveying, Inc.)

**REGIONAL/LOCAL SETTING & TOPOGRAPHY**

The location is approximately 32 miles southeasterly of Ouray, Utah. Access is by State of Utah highways and Uintah County Seep Ridge road. Improving 0.9 miles of existing road and constructing 240 feet of new road from the new road, which will access the proposed 12-22-23-32 well, will access the proposed site.

The general area is the head of the Sand Wash drainage east of the Seep Ridge road and approximately 2 miles south of Buck Canyon. Sand Wash is an ephemeral drainage, which runs northerly approximately 25 miles to the White River. The area is characterized by varied terrain consisting of large flats, shallow draws and small ridges. No seeps or springs are known to exist in the area.

The proposed Sand Wash 12-22-44-32 well lies on a gentle rolling flat with minor draws. Higher ridges exist approximately 1-½ miles to the east.

**SURFACE USE PLAN**

CURRENT SURFACE USE: Wildlife. Summer cattle grazing. Hunting.

PROPOSED SURFACE DISTURBANCE: Improving 0.9 miles of existing road and constructing 240 feet of new road; a well pad 365'x 225' plus reserve pit and soil stockpile storage outside the described area.

LOCATION OF EXISTING WELLS WITHIN A 1-MILE RADIUS: None presently exist but several are planned. See attached map (Topographic Map C) from GIS database.

LOCATION OF PRODUCTION FACILITIES AND PIPELINES: All production facilities will be on location and added after drilling well. Pipeline will follow access road approximately 240 feet to tie-in point.

SOURCE OF CONSTRUCTION MATERIAL: All construction material will be

borrowed from site during construction of location.

ANCILLARY FACILITIES: None will be required.

WILL DRILLING AT THIS LOCATION GENERATE PUBLIC INTEREST OR CONCERNS?  
EXPLAIN: Unlikely. Oilfield activity is common in the area is the dominant use.

#### **WASTE MANAGEMENT PLAN:**

Drilled cuttings will be settled into reserve pit. Liquids from pit will be allowed to evaporate. Formation water will be confined to storage tanks. Commercial contractor will handle sewage facilities, storage and disposal. Trash will be contained in trash baskets and hauled to an approved landfill.

#### **ENVIRONMENTAL PARAMETERS**

AFFECTED FLOODPLAINS AND/OR WETLANDS: None

FLORA/FAUNA: Poorly vegetated with big sagebrush and scattered pinion-juniper. Little under story vegetation; pronghorn antelope, rabbits, rodents, songbirds, raptors, elk, deer, bobcat, coyote.

SOIL TYPE AND CHARACTERISTICS: Moderately deep sandy loam with a few small shale rocks on the surface.

EROSION/SEDIMENTATION/STABILITY: No drainages are intersected by the proposed location. The reserve pit is within a cut area on the southwest corner of the location. No stability problems are anticipated with the construction and operation of the location.

PALEONTOLOGICAL POTENTIAL: Surveyed by AH, on 06-08-2006. Report will be submitted to SITLA.

#### **RESERVE PIT**

CHARACTERISTICS: 160' by 60' and 8' deep. The reserve pit is within a cut area on the southwest corner of the location. No stability problems are anticipated with the construction and operation of the location.

LINER REQUIREMENTS (Site Ranking Form attached): A liner will be required for reserve pit. Sensitivity score of 25, rating as Level I, Highly Sensitive. Operator said they would install a 16 mil. Liner with a ½" felt sub-liner.

#### **SURFACE RESTORATION/RECLAMATION PLAN**

AS PER SITLA.

SURFACE AGREEMENT: AS PER SITLA.

CULTURAL RESOURCES/ARCHAEOLOGY: Site has been inspected and a report will be submitted to SITLA.

**OTHER OBSERVATIONS/COMMENTS**

A buried pipeline operated by Canyon Gas will be crossed with the access road, which will be improved.

Jim Davis and Ed Bonner of SITLA and Ben Williams of UDWR were invited to the pre-site on June 22, 2006. Mr. Davis attended. Mr. Williams said he had a planning meeting that day and would not be able to attend the review.

**ATTACHMENTS**

Photos of site have been taken and placed on file.

Floyd Bartlett  
DOGM REPRESENTATIVE

06/30/2006 10:30 AM  
DATE/TIME

**Evaluation Ranking Criteria and Ranking Score  
For Reserve and Onsite Pit Liner Requirements**

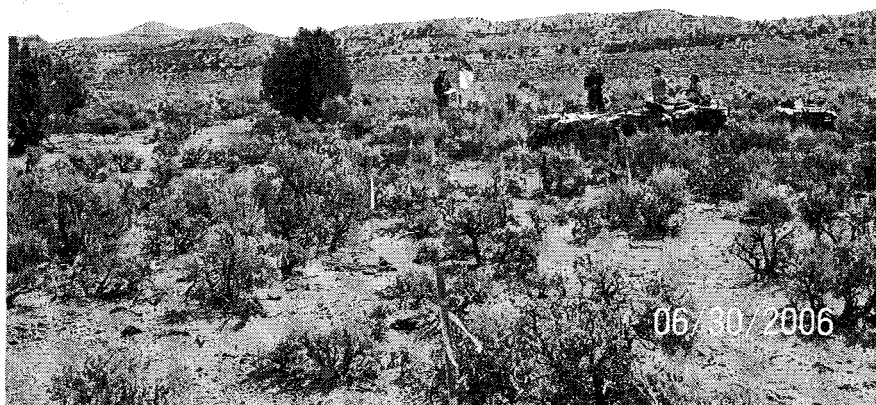
<u>Site-Specific Factors</u>	<u>Ranking</u>	<u>Site Ranking</u>
Distance to Groundwater (feet)		
>200	0	
100 to 200	5	
75 to 100	10	
25 to 75	15	
<25 or recharge area	20	
Distance to Surf. Water (feet)		
>1000	0	
300 to 1000	2	
200 to 300	10	
100 to 200	15	
< 100	20	<u>0</u>
Distance to Nearest Municipal Well (feet)		
>5280	0	
1320 to 5280	5	
500 to 1320	10	
<500	20	<u>0</u>
Distance to Other Wells (feet)		
>1320	0	
300 to 1320	10	
<300	20	<u>0</u>
Native Soil Type		
Low permeability	0	
Mod. permeability	10	
High permeability	20	<u>20</u>
Fluid Type		
Air/mist	0	
Fresh Water	5	
TDS >5000 and <10000	10	
TDS >10000 or Oil Base Mud Fluid	15	
containing significant levels of hazardous constituents	20	<u>5</u>
Drill Cuttings		
Normal Rock	0	
Salt or detrimental	10	<u>0</u>
Annual Precipitation (inches)		
<10	0	
10 to 20	5	
>20	10	
Affected Populations		
<10	0	
10 to 30	6	
30 to 50	8	
>50	10	<u>0</u>
Presence of Nearby Utility		
Conduits		
Not Present	0	
Unknown	10	
Present	15	<u>0</u>

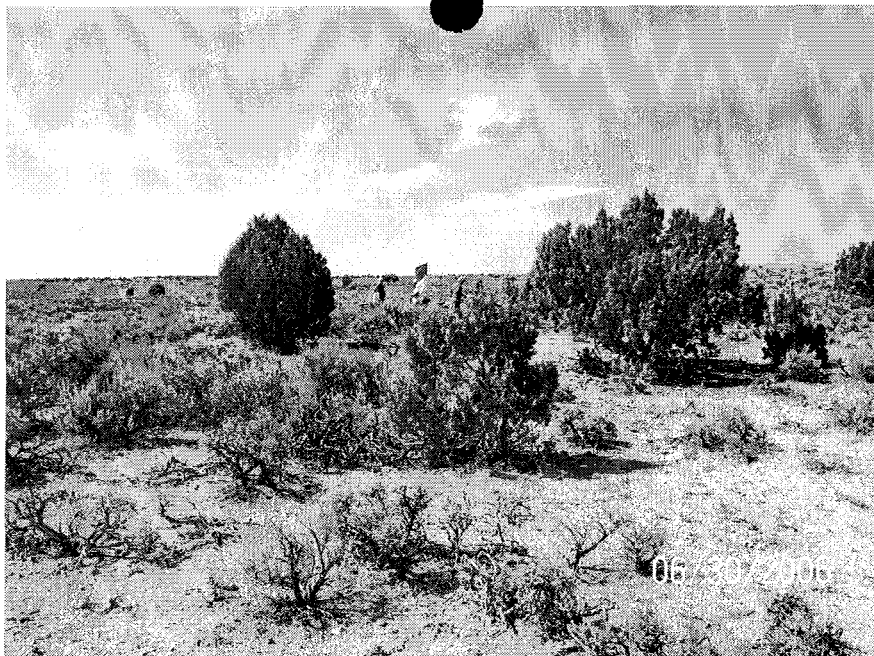
**Final Score**      25      (Level I Sensitivity)

Sensitivity Level I = 20 or more; total containment is required.

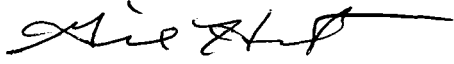
Sensitivity Level II = 15-19; lining is discretionary.

Sensitivity Level III = below 15; no specific lining is required.





**STATE ACTIONS**  
**Resource Development Coordinating Committee**  
**Governor's Office of Planning and Budget**  
**5110 State Office Building**  
**SLC, UT 84114**  
**Phone No. 537-9230**

<b>1. State Agency</b> Oil, Gas and Mining 1594 West North Temple, Suite 1210 Salt Lake City, UT 84114-5801	<b>2. Approximate date project will start:</b>  Upon Approval or July 6, 2006
<b>3. Title of proposed action:</b> Application for Permit to Drill	
<b>4. Description of Project:</b>  Enduring Resources, LLC proposes to drill the Sand Wash 12-22-44-32 well (wildcat) on a State lease ML-47089, Uintah County, Utah. This action is being presented to the RDCC for consideration of resource issues affecting state interests. The Division of Oil, Gas and Mining is the primary administrative agency in this action and must issue approval before operations commence.	
<b>5. Location and detailed map of land affected (site location map required, electronic GIS map preferred)</b> (include UTM coordinates where possible) (indicate county) 801' FSL 512' FEL, SE/4 SE/4, Section 32, Township 12 South, Range 22 East, Uintah County, Utah	
<b>6. Possible significant impacts likely to occur:</b> Surface impacts include up to five acres of surface disturbance during the drilling and completion phase (estimated for five weeks duration). If oil and gas in commercial quantities is discovered, the location will be reclaimed back to a net disturbance of between one and two acres – not including road, pipeline, or utility infrastructure. If no oil or gas is discovered, the location will be completely reclaimed.	
<b>7. Identify local government affected</b> a. Has the government been contacted? No. b. When? c. What was the response? d. If no response, how is the local government(s) likely to be impacted?	
<b>8. For acquisitions of land or interests in land by DWR or State Parks please identify state representative and state senator for the project area. Name and phone number of state representative, state senator near project site, if applicable:</b> a. Has the representative and senator been contacted? N/A	
<b>9. Areawide clearinghouse(s) receiving state action:</b> (to be sent out by agency in block 1) Uintah Basin Association of Governments	
<b>10. For further information, contact:</b>     <b>Diana Whitney</b> <b>Phone:</b> (801) 538-5312	<b>11. Signature and title of authorized officer</b>    Gil Hunt, Associate Director <b>Date:</b> June 22, 2006

**STATE OF UTAH**  
DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF OIL, GAS AND MINING

FORM 3

AMENDED REPORT ☐  
(highlight changes)

<b>APPLICATION FOR PERMIT TO DRILL</b>				5. MINERAL LEASE NO: <b>ML-47089</b>	6. SURFACE: <b>State</b>
1A. TYPE OF WORK: <b>DRILL</b> <input checked="" type="checkbox"/> <b>REENTER</b> <input type="checkbox"/> <b>DEEPEN</b> <input type="checkbox"/>				7. IF INDIAN, ALLOTTEE OR TRIBE NAME:	
B. TYPE OF WELL: <b>OIL</b> <input type="checkbox"/> <b>GAS</b> <input checked="" type="checkbox"/> <b>OTHER</b> _____ <b>SINGLE ZONE</b> <input type="checkbox"/> <b>MULTIPLE ZONE</b> <input checked="" type="checkbox"/>				8. UNIT or CA AGREEMENT NAME:	
2. NAME OF OPERATOR: <b>Enduring Resources, LLC</b>				9. WELL NAME and NUMBER: <b>Sand Wash 12-22-44-32</b>	
3. ADDRESS OF OPERATOR: <b>475 17th St., Ste 1500</b> CITY <b>Denver</b> STATE <b>CO</b> ZIP <b>80220</b>				10. FIELD AND POOL, OR WILDCAT: <b>Undesignated Wildcat</b>	
4. LOCATION OF WELL (FOOTAGES) AT SURFACE: <b>801' FSL - 512' FEL</b> AT PROPOSED PRODUCING ZONE: <b>Same</b>				11. QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: <b>SESE 32 12S 22E</b>	
14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE: <b>63.8 South of Vernal, UT</b>				12. COUNTY: <b>Uintah</b>	
15. DISTANCE TO NEAREST PROPERTY OR LEASE LINE (FEET) <b>512'</b>		16. NUMBER OF ACRES IN LEASE: <b>640</b>		17. NUMBER OF ACRES ASSIGNED TO THIS WELL: <b>40 acres</b>	
18. DISTANCE TO NEAREST WELL (DRILLING, COMPLETED, OR APPLIED FOR) ON THIS LEASE (FEET) <b>1000' +</b>		19. PROPOSED DEPTH: <b>6,800</b>		20. BOND DESCRIPTION: <b>RLB0008031</b>	
21. ELEVATIONS (SHOW WHETHER DF, RT, GR, ETC.): <b>6296'    RT-KB</b>		22. APPROXIMATE DATE WORK WILL START: <b>8/1/2006</b>		23. ESTIMATED DURATION: <b>20 days</b>	

24. PROPOSED CASING AND CEMENTING PROGRAM							
SIZE OF HOLE	CASING SIZE, GRADE, AND WEIGHT PER FOOT	SETTING DEPTH	CEMENT TYPE, QUANTITY, YIELD, AND SLURRY WEIGHT				
<b>20"</b>	<b>14" line pipe</b>	<b>40</b>	<b>3 yards</b>	<b>Ready Mix</b>			
<b>11"</b>	<b>8-5/8" J-55 24#</b>	<b>2,000</b>	<b>Premium Lead</b>	<b>183 sxs</b>	<b>3.50</b>	<b>11.1</b>	
			<b>Premium Tail</b>	<b>183 sxs</b>	<b>1.15</b>	<b>15.8</b>	
<b>7-7/8"</b>	<b>4-1/2" N-80 11.6#</b>	<b>6,800</b>	<b>Class G</b>	<b>58 sxs</b>	<b>3.3</b>	<b>11.0</b>	
			<b>50/50 Poz Class G</b>	<b>810 sxs</b>	<b>1.56</b>	<b>14.3</b>	

25. ATTACHMENTS	
VERIFY THE FOLLOWING ARE ATTACHED IN ACCORDANCE WITH THE UTAH OIL AND GAS CONSERVATION GENERAL RULES:	
<input checked="" type="checkbox"/> WELL PLAT OR MAP PREPARED BY LICENSED SURVEYOR OR ENGINEER <input checked="" type="checkbox"/> EVIDENCE OF DIVISION OF WATER RIGHTS APPROVAL FOR USE OF WATER	<input checked="" type="checkbox"/> COMPLETE DRILLING PLAN <input type="checkbox"/> FORM 5, IF OPERATOR IS PERSON OR COMPANY OTHER THAN THE LEASE OWNER

NAME (PLEASE PRINT) Alvin R. (Al) Arlian    TITLE Landman - Regulatory Specialist

SIGNATURE     DATE 6/8/2006

(This space for State use only)

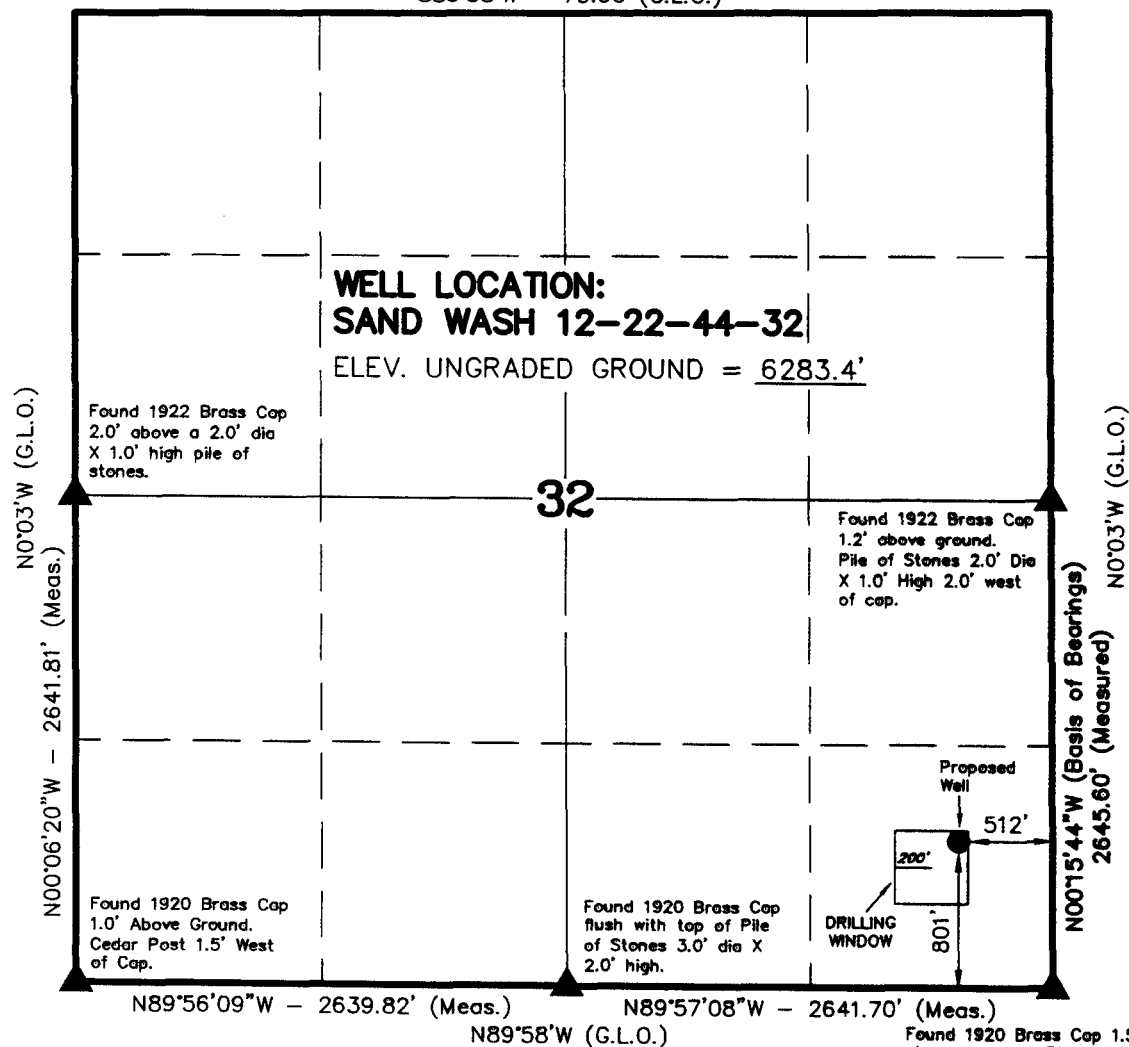
API NUMBER ASSIGNED: 43-047-38286

APPROVAL:

**RECEIVED**  
**JUN 12 2006**  
**DIV. OF OIL, GAS & MINING**

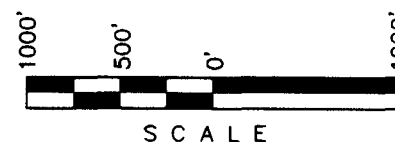
# T12S, R22E, S.L.B.&M.

S89°58'W - 79.96 (G.L.O.)



## ENDURING RESOURCES

WELL LOCATION, SAND WASH  
 12-22-44-32, LOCATED AS SHOWN IN  
 THE SE 1/4 SE 1/4 OF SECTION 32,  
 T12S, R22E, S.L.B.&M. UTAH COUNTY,  
 UTAH.



### NOTES:

1. Well footages are measured at right angles to the Section Lines.
2. Bearings are based on Global Positioning Satellite observations.

THIS IS TO CERTIFY THAT THE ABOVE PLAT WAS  
 PREPARED FROM FIELD NOTES OF ACTUAL SURVEYS  
 MADE BY ME OR UNDER MY SUPERVISION AND THAT  
 THE SAME ARE TRUE AND CORRECT TO THE BEST OF  
 MY KNOWLEDGE AND BELIEF.

REGISTERED LAND SURVEYOR  
 REGISTRATION No. 362251  
 STATE OF UTAH

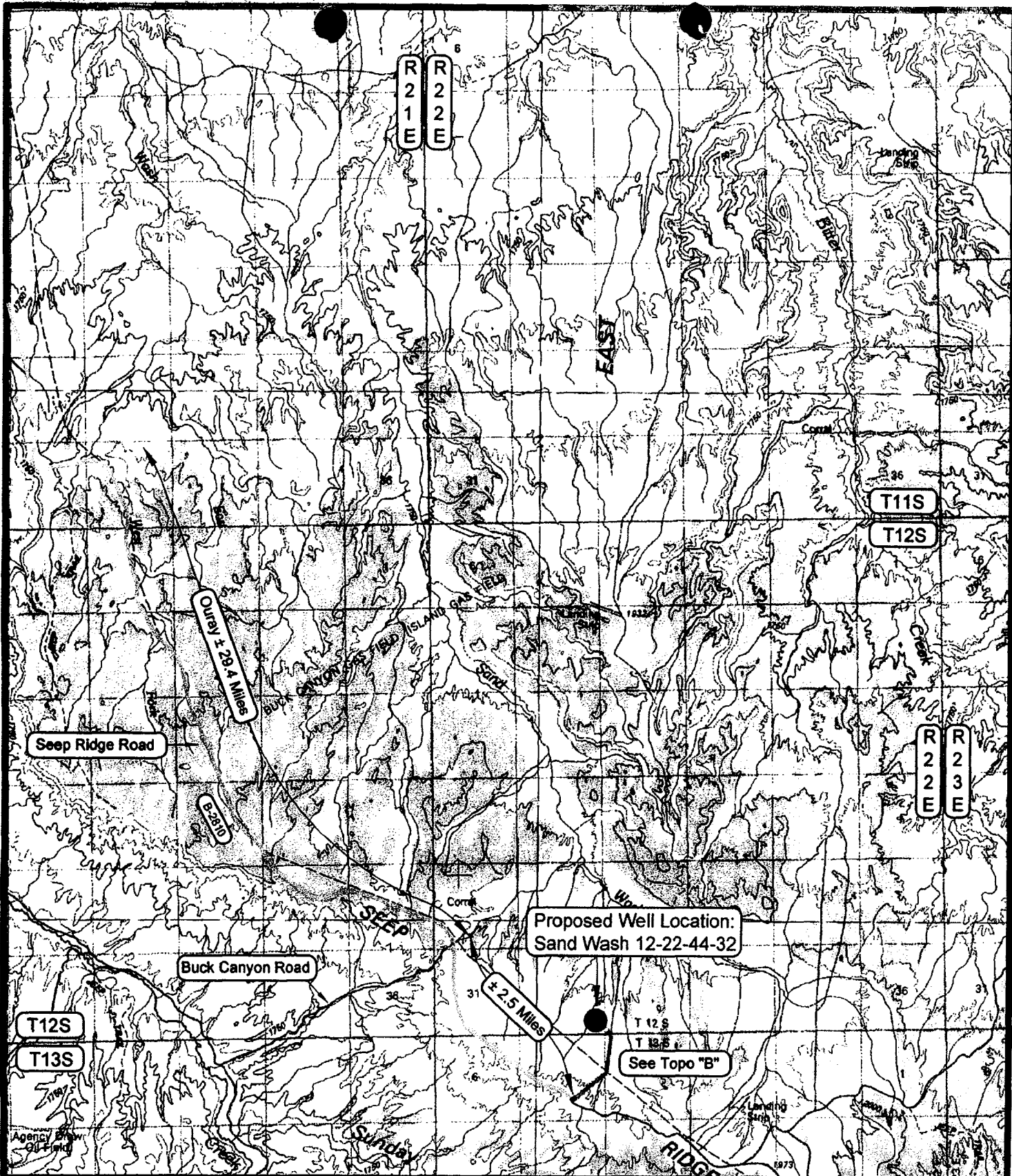
## TIMBERLINE LAND SURVEYING, INC.

38 WEST 100 NORTH. - VERNAL, UTAH 84078  
 (435) 789-1365

DATE SURVEYED: 05-15-06	SURVEYED BY: K.R.K.	SHEET 2 OF 10
DATE DRAWN: 05-19-06	DRAWN BY: M.W.W.	
SCALE: 1" = 1000'	Date Last Revised:	

▲ = SECTION CORNERS LOCATED  
 BASIS OF ELEVATION IS BENCH MARK 70 EAM 1965  
 LOCATED IN THE SW 1/4 OF SECTION 31, T12S,  
 R22E, S.L.B.&M. THE ELEVATION OF THIS BENCH  
 MARK IS SHOWN ON THE BATES KNOLLS 7.5 MIN.  
 QUADRANGLE AS BEING 6356'.

**SAND WASH 12-22-44-32**  
**(Proposed Well Head)**  
**NAD 83 Autonomous**  
 LATITUDE = 39° 43' 30.46"  
 LONGITUDE = 109° 28' 16.34"



#### LEGEND

PROPOSED ACCESS ROAD  
 ■■■■ = SUBJECT WELL  
 ■■■■ = OTHER WELLS  
 --- = EXISTING ROAD  
 --- = EXISTING ROAD (TO BE IMPROVED)

(B-5460) = COUNTY ROAD CLASS  
 & NUMBER

#### TOPOGRAPHIC MAP "A"

SCALE: 1:100,000

DRAWN BY: B.J.Z.

DATE SURVEYED: 05-15-06

DATE DRAWN: 05-30-06

REVISED:

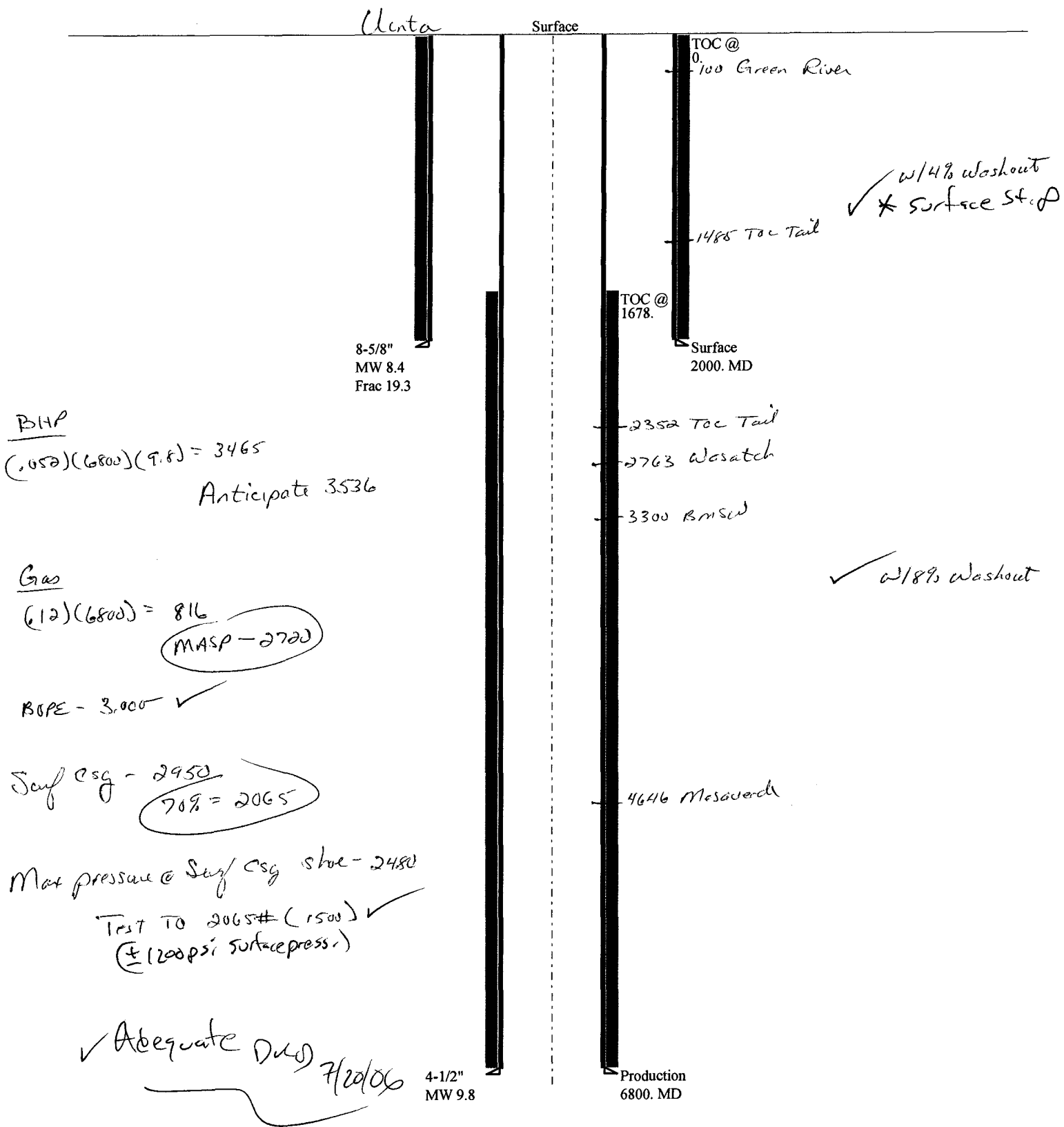
#### ENDURING RESOURCES

**Sand Wash 12-22-44-32**  
**SECTION 32, T12S, R22E, S.L.B.&M.**

**Timberline Land Surveying, Inc.**  
 38 West 100 North Vernal, Utah 84078  
 (435) 789-1365

**SHEET**  
**7**  
**OF 10**

Casing Schematic



Well name:

**07-06 Enduring Sand Wash 12-22-44-32**Operator: **Enduring Resource, LLC**String type: **Surface**

Project ID:

**43-047-38286**Location: **Uintah County****Design parameters:****Collapse**

Mud weight: 8.400 ppg

Design is based on evacuated pipe.

**Minimum design factors:****Collapse:**

Design factor 1.125

**Burst:**

Design factor 1.00

**Environment:**

H2S considered? No

Surface temperature: 75 °F

Bottom hole temperature: 103 °F

Temperature gradient: 1.40 °F/100ft

Minimum section length: 500 ft

Cement top: Surface

**Burst**

Max anticipated surface pressure:

1,760 psi

Internal gradient:

0.120 psi/ft

Calculated BHP

2,000 psi

No backup mud specified.

**Tension:**

8 Round STC: 1.80 (J)

8 Round LTC: 1.80 (J)

Buttress: 1.60 (J)

Premium: 1.50 (J)

Body yield: 1.50 (B)

Non-directional string.

**Re subsequent strings:**

Next setting depth: 6,800 ft

Next mud weight: 9.800 ppg

Next setting BHP: 3,462 psi

Fracture mud wt: 19.250 ppg

Fracture depth: 2,000 ft

Injection pressure 2,000 psi

Tension is based on buoyed weight.

Neutral point: 1,748 ft

Run Seq	Segment Length (ft)	Size (in)	Nominal Weight (lbs/ft)	Grade	End Finish	True Vert Depth (ft)	Measured Depth (ft)	Drift Diameter (in)	Internal Capacity (ft³)
1	2000	8.625	24.00	J-55	ST&C	2000	2000	7.972	96.3
Run Seq	Collapse Load (psi)	Collapse Strength (psi)	Collapse Design Factor	Burst Load (psi)	Burst Strength (psi)	Burst Design Factor	Tension Load (Kips)	Tension Strength (Kips)	Tension Design Factor
1	873	1370	1.570	2000	2950	1.48	42	244	5.82 J

Prepared by: Clinton Dworshak  
Utah Div. of Oil & MiningPhone: 801-538-5280  
FAX: 801-359-3940Date: July 12, 2006  
Salt Lake City, Utah

## Remarks:

Collapse is based on a vertical depth of 2000 ft, a mud weight of 8.4 ppg. The casing is considered to be evacuated for collapse purposes. Collapse strength is based on the Westcott, Dunlop &amp; Kemler method of biaxial correction for tension.

Burst strength is not adjusted for tension.

*Engineering responsibility for use of this design will be that of the purchaser.*

Well name:

**07-06 Enduring Sand Wash 12-22-44-32**Operator: **Enduring Resource, LLC**String type: **Production**

Project ID:

**43-047-38286**Location: **Uintah County****Design parameters:****Collapse**

Mud weight: 9.800 ppg

Design is based on evacuated pipe.

**Minimum design factors:****Collapse:**

Design factor 1.125

**Burst:**

Design factor 1.00

**Environment:**

H2S considered? No

Surface temperature: 75 °F

Bottom hole temperature: 170 °F

Temperature gradient: 1.40 °F/100ft

Minimum section length: 1,500 ft

Cement top: 1,678 ft

**Burst**

Max anticipated surface pressure:

1,106 psi

Internal gradient:

0.346 psi/ft

Calculated BHP

3,462 psi

No backup mud specified.

**Tension:**

8 Round STC: 1.80 (J)

8 Round LTC: 1.80 (J)

Buttress: 1.60 (J)

Premium: 1.50 (J)

Body yield: 1.50 (B)

Non-directional string.

Tension is based on buoyed weight.

Neutral point: 5,804 ft

Run Seq	Segment Length (ft)	Size (in)	Nominal Weight (lbs/ft)	Grade	End Finish	True Vert Depth (ft)	Measured Depth (ft)	Drift Diameter (in)	Internal Capacity (ft³)
1	6800	4.5	11.60	N-80	LT&C	6800	6800	3.875	157.6
Run Seq	Collapse Load (psi)	Collapse Strength (psi)	Collapse Design Factor	Burst Load (psi)	Burst Strength (psi)	Burst Design Factor	Tension Load (Kips)	Tension Strength (Kips)	Tension Design Factor
1	3462	6350	1.834	3462	7780	2.25	67	223	3.31 J

Prepared by: Clinton Dworshak  
Utah Div. of Oil & MiningPhone: 801-538-5280  
FAX: 801-359-3940Date: July 12, 2006  
Salt Lake City, Utah

## Remarks:

Collapse is based on a vertical depth of 6800 ft, a mud weight of 9.8 ppg. The casing is considered to be evacuated for collapse purposes. Collapse strength is based on the Westcott, Dunlop &amp; Kemler method of biaxial correction for tension.

Burst strength is not adjusted for tension.

Engineering responsibility for use of this design will be that of the purchaser.

# Enduring Resources, LLC

**Sand Wash 12-22-44-32**

SE-SE 32-12S-22E

Uintah County, Utah

State Lease: ML-47089

## ONSHORE ORDER 1 - DRILLING PLAN

### 1. Estimated Tops of Geological Markers:

Formation	Depth (K.B.)
Uinta	Surface
Green River	100
Wasatch	2763
Mesaverde	4646

### 2. Estimated Depths of Anticipated Water, Oil, Gas or Other Minerals:

Substance	Formation	Depth (K.B.)
	KB-Uinta Elevation: 6296'	
Oil / Gas	Green River	100
Oil /Gas	Wasatch	2763
Oil /Gas	Mesaverde	4646
	Estimated TD	6800

A 11" hole will be drilled to approximately 2000 feet. The depth will be determined by the depth that the Birds Nest zone is encountered. The hole will be drilled 400 feet beyond the top of the Birds Nest zone and surface casing will be set.

### 3. Pressure Control Equipment: (3000 psi schematic attached)

A. Type: Eleven (11) inch double gate hydraulic BOP with eleven (11) inch annular preventer on 3,000 psi casinghead, with 3,000 psi choke manifold equipped per the attached diagram. BOPE as specified in *Onshore Oil & Gas Order Number 2*. A PVT, stroke counter and flow sensor will be installed to check for flow and monitor pit volume.

B. Pressure Rating: 3,000 psi BOPE

C. Kelly will be equipped with upper and lower Kelly valves.

D. Testing Procedure: Annular Preventer

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**JUN 23 2006**

DIV. OF OIL, GAS & MINING

At a minimum, the annular preventer will be pressure tested to 50% of the stack rated working pressure for a period of ten (10) minutes or until provisions of the test are met, whichever is longer.

At a minimum, the above pressure test will be performed:

1. When the annular preventer is initially installed;
2. Whenever any seal subject to test pressure is broken;
3. Following related repairs; and
4. At thirty (30) day intervals.

In addition to the above, the annular preventer will be functionally operated at least weekly.

#### Blow-Out Preventer

At a minimum, the BOP, choke manifold, and related equipment will be pressure tested to the approved working pressure of the BOP stack (if isolated from the surface casing by a test plug) or to 70% of the internal yield strength of the surface casing (if the BOP is not isolated from the casing by a test plug). Pressure will be maintained for a period of at least ten (10) minutes or until the requirements of the test are met, whichever is longer.

At a minimum, the above pressure test will be performed:

1. When the BOP is initially installed;
2. Whenever any seal subject to test pressure is broken;
3. Following related repairs; and
4. At thirty (30) day intervals.

In addition to the above, the pipe and blind rams will be activated each trip, but not more than once each day. All BOP drills and tests will be recorded in the IADC driller's log.

#### E. Miscellaneous Information:

The blowout preventer and related pressure control equipment will be installed, tested and maintained in compliance with the specifications in and requirements of *Onshore Oil & Gas Order Number 2*.

#### 4. Proposed Casing & Cementing Program:

##### A. Casing Program: All New

Hole Size	Casing Size	Wt./Ft.	Grade	Joint	Depth Set (MD)
20"	14" O.D.				40' (GL)
11"	8-5/8"	24#	J-55	ST&C	0 – 2,016' (KB) est.
7-7/8"	4-1/2"	11.6#	N-80	LT&C	0 – 6800' (KB)

The surface casing will have guide shoe, 1 joint, insert float collar. Centralize the shoe joint with bowspring centralizers in the middle and top of the joint and the next 16 joints with bowspring centralizers on every other collar (8 centralizers total). Thread lock guide shoe.

Casing string(s) will be pressure tested to 0.22 psi/foot of casing string length or 1500 psi, whichever is greater (not to exceed 70% of the internal yield strength of the casing), after cementing and prior to drilling out from under the casing shoe.

**B. Casing Design Parameters:**

Depth (MD)	Casing	Collapse(psi)/SF	Burst (psi)/SF	Tension(mlbs)/SF
40' (GL)	14" OD			
2016' (KB)	8-5/8", 24#/ft, J55, STC	1370/1.52(a)	2950/3.28(b)	244/5.81(c)
6800' (KB)	4-1/2", 11.6#/ft, N-80, LTC	6350/1.80 (d)	7780/2.39 (e)	223/3.29(f)

- (a.) based on full evacuation of pipe with 8.6 ppg fluid on annulus
- (b.) based on 8.6 ppg gradient with no fluid on annulus
- (c.) based on casing string weight in 8.6 ppg mud
- (d.) based on full evacuation of pipe with 10.0 ppg fluid on annulus
- (e.) based on 9.2 ppg gradient, gas to surface, with no fluid on annulus,  
no gas gradient
- (f.) based on casing string weight in 9.2 ppg mud

**PROPOSED CEMENTING PROGRAM**

**Surface Casing (if well will circulate)-Cemented to surface**

CASING	SLURRY	FT. of FILL	CEMENT TYPE	SXS	EXCESS (%)	WEIGHT (ppg)	YIELD (ft <sup>3</sup> /sx)
8-5/8"	Lead	1516	Premium cement + 16% gel + 0.25 pps celloflake	138	25%	11.1	3.50
8-5/8"	Tail	500	Premium cement + 2% CaCl <sub>2</sub> + 0.25 pps celloflake	138	25%	15.8	1.15

A cement top job is required if cement fallback is greater than 10' below ground level. Top job (weight 15.8 ppg, yield 1.15 ft<sup>3</sup>/sx) cement will be premium cement w/ 3% CaCl<sub>2</sub>.+0.25 pps celloflake. Volume as required

**Surface Casing (if well will not circulate) - Cemented to surface**

CASING	SLURRY	FT. of FILL	CEMENT TYPE	SXS	EXCESS (%)	WEIGHT (ppg)	YIELD (ft <sup>3</sup> /sx)
8-5/8"	Lead	500	Premium cement + 2% CaCl <sub>2</sub> + 0.25 pps celloflake	138	25	15.8	1.15
8-5/8"	Top job	As req.	Premium cement + 3% CaCl <sub>2</sub> + 0.25 pps celloflake	As Req.		15.8	1.15

**Production Casing and Liner** - Cemented TD to 300' above base of surface casing

CASING	SLURRY	FT. of FILL	CEMENT TYPE	SXS	EXCESS (%)	WEIGHT (ppg)	YIELD (ft <sup>3</sup> /sx)
4-1/2"	Lead	647	Class "G" + 5% NaCl + 12% Gel + 0.25 pps celloflake + 0.2% antifoam + 0.25% fluid loss + 1% extender	58	25	11.0	3.3
4-1/2"	Tail	4437	50/50 POZ Class G + 2% gel +1% CaCl <sub>2</sub> + 0.2% dispersant + 0.2% fluid loss + 0.1% antifoam	810	25	14.3	1.56

Cement volumes for the 4-1/2" Production Casing will be calculated to provide a top of cement to 300' above base of surface casing. Cement volumes are approximate and were calculated under the assumption that a gauge hole will be achieved. Actual cement volumes may vary due to variations in the actual hole size and will be determined by running a caliper log on the drilled hole. Actual cement types may vary due to hole conditions and cement contractor used.

All waiting on cement (WOC) times will be adequate to achieve a minimum of 500 psi compressive strength at the casing shoe prior to drilling out.

5. **Drilling Fluids (mud) Program:**

Interval (MD)	Mud Weight	Fluid Loss	Viscosity	Mud Type
0' - 2016' (KB)		No cntrl		Air/mist
2000'-3000' (KB)	8.4-8.6	No cntrl	28-36	Water
3000'-6800' (KB)	8.8-9.8	8 - 10 ml	32-42	Water/Gel

Sufficient mud material(s) to maintain mud properties, control lost circulation and contain a blowout will be available at the well site during drilling operations.

6. **Evaluation Program:**

Tests: No tests are currently planned.

Coring: No cores are currently planned.

Samples: No sampling is currently planned.

Logging

- Dual Induction – SFL /Gamma Ray/Caliper/SP/TDLT/CNL/ML  
TD to Base Surface Casing
- Cement Bond Log / Gamma Ray:  
TD to Base of Surface Casing or Top of Cement if below Base of Surface Casing

Stimulation: A stimulation or frac treatment will be designed for completion of this well based on openhole log analysis. The drill site, as approved, will be sufficient size to accommodate all completion activities.

7. **Abnormal Conditions:**

No abnormal temperatures or pressures are anticipated. No H<sub>2</sub>S has been encountered or known to exist from previous wells drilled to similar depths in the general area.

Maximum anticipated bottom hole pressure equals approximately 3,536 psi (calculated at 0.52psi/foot of hole) and maximum anticipated surface pressure equals approximately 2,040 psi (anticipated bottom hole pressure minus the pressure of a partially evacuated hole calculated at 0.22 psi/foot of hole).

8. **Anticipated Starting Dates:**

- Anticipated Commencement Date- Within one year of APD issue.
- Drilling Days- Approximately 10 days
- Completion Days - Approximately 10 days
- Anticipate location construction within 30 days of permit issue.

9. **Variances:**

None anticipated

10. **Other:**

A Cultural Resource Inventory and Paleontology reconnaissance shall be conducted for the well location, access route and pipeline. The reports shall be submitted to the Division of Oil, Gas and Mining and the School and Institutional Trust lands Administration upon their receipt.

Single Shot directional surveys will be dropped every 2000 feet to monitor hole angle.

**From:** Ed Bonner  
**To:** Whitney, Diana  
**Date:** 9/12/2006 2:43:10 PM  
**Subject:** Well Clearance

The following wells have been given cultural resource clearance by the Trust Lands Cultural Resources Group:

Cochrane Resources, Inc  
Divide 32-32 (API 43 019 31487)

Enduring Resources, LLC  
Southam Canyon 10-25-11-32 (API 43 047 38395)  
Southam Canyon 10-25-14-32 (API 43 047 38396)  
Southam Canyon 10-25-34-32 (API 43 047 38401)  
Rock House 10-23-34-32 (API 43 047 38470)  
East Bench 11-22-31-32 (API 43 047 38273)  
Sand Wash 12-22-23-32 (API 43 047 38285)  
Sand Wash 12-22-44-32 (API 43 047 38286)  
Buck Camp 12-22-23-2 (API 43 047 38483)  
Buck Camp 12-22-14-2 (API 43 047 38482)

The Houston Exploration Company  
North Horseshoe 5-16-6-22 (API 43 047 38406)

Newfield Production Company  
Horseshoe Bend State 4-28-6-21 (API 43 047 38366)

XTO Energy, Inc  
State of Utah 17-8-19-11D (API 43 015 30695)  
State of Utah 17-8-20-13 (API 43 015 30698)

If you have any questions regarding this matter please give me a call.

**CC:** Davis, Jim; Garrison, LaVonne; Hill, Brad; Hunt, Gil



**State of Utah**

**Department of  
Natural Resources**

MICHAEL R. STYLER  
*Executive Director*

**Division of  
Oil, Gas & Mining**

JOHN R. BAZA  
*Division Director*

JON M. HUNTSMAN, JR.  
*Governor*

GARY R. HERBERT  
*Lieutenant Governor*

September 12, 2006

Enduring Resources, LLC  
475 17th St., Ste. 1500  
Denver, CO 80202

Re: Sand Wash 12-22-44-32 Well, 801' FSL, 512' FEL, SE SE, Sec. 32,  
T. 12 South, R. 22 East, Uintah' County, Utah

Gentlemen:

Pursuant to the provisions and requirements of Utah Code Ann. § 40-6-1 *et seq.*, Utah Administrative Code R649-3-1 *et seq.*, and the attached Conditions of Approval, approval to drill the referenced well is granted.

This approval shall expire one year from the above date unless substantial and continuous operation is underway, or a request for extension is made prior to the expiration date. The API identification number assigned to this well is 43-047-38286.

Sincerely,

A handwritten signature in black ink, appearing to read "Gil Hunt".

Gil Hunt  
Associate Director

pab  
Enclosures

cc: Uintah' County Assessor  
SITLA

Operator: Enduring Resources, LLC  
Well Name & Number Sand Wash 12-22-44-32  
API Number: 43-047-38286  
Lease: ML-47089

Location: SE SE Sec. 32 T. 12 South R. 22 East

### Conditions of Approval

1. **General**

Compliance with the requirements of Utah Admin. R. 649-1 *et seq.*, the Oil and Gas Conservation General Rules, and the applicable terms and provisions of the approved Application for permit to drill.

2. **Notification Requirements**

The operator is required to notify the Division of Oil, Gas and Mining of the following actions during drilling of this well:

- 24 hours prior to cementing or testing casing
- 24 hours prior to testing blowout prevention equipment
- 24 hours prior to spudding the well
- within 24 hours of any emergency changes made to the approved drilling program
- prior to commencing operations to plug and abandon the well

The following are Division of Oil, Gas and Mining contacts and their work telephone numbers (please leave a voice mail message if the person is not available to take the call):

- Dan Jarvis at (801) 538-5338
- Carol Daniels at (801) 538-5284 (spud)

3. **Reporting Requirements**

All required reports, forms and submittals will be promptly filed with the Division, including but not limited to the Entity Action Form (Form 6), Report of Water Encountered During Drilling (Form 7), Weekly Progress Reports for drilling and completion operations, and Sundry Notices and Reports on Wells requesting approval of change of plans or other operational actions.

4. Compliance with the State of Utah Antiquities Act forbids disturbance of archeological, historical, or paleontological remains. Should archeological, historical or paleontological remains be encountered during your operations, you are required to immediately suspend all operations and immediately inform the Trust Lands Administration and the Division of State History of the discovery of such remains.

5. Compliance with the Conditions of Approval/Application for Permit to Drill outlined in the Statement of Basis. (Copy Attached)

6. This proposed well is located in an area for which drilling units (well spacing patterns) have not been established through an order of the Board of Oil, Gas and Mining (the "Board"). In order to avoid the possibility of waste or injury to correlative rights, the operator is requested, once the well has been drilled, completed, and has produced, to analyze geological and engineering data generated therefrom, as well as any similar data from surrounding areas if available. As soon as is practicable after completion of its analysis, and if the analysis suggests an area larger than the quarter-quarter section upon which the well is located is being drained, the operator is requested to seek an appropriate order from the Board establishing drilling and spacing units in conformance with such analysis by filing a Request for Agency Action with the Board.
7. Operator shall comply with applicable recommendations resulting from Resource Development Coordinating Committee review. Statements attached.
8. Surface casing shall be cemented to the surface.

STATE OF UTAH  
DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF OIL, GAS AND MINING

CONFIDENTIAL

FORM 9

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.

1. TYPE OF WELL OIL WELL <input type="checkbox"/> GAS WELL <input checked="" type="checkbox"/> OTHER _____		7. UNIT or CA AGREEMENT NAME: n/a
2. NAME OF OPERATOR: Enduring Resources, LLC		8. WELL NAME and NUMBER: Sand Wash 12-22-44-32
3. ADDRESS OF OPERATOR: 475 17th Street, Suite 1500 CITY Denver STATE CO ZIP 80202		9. API NUMBER: 4304738286
4. LOCATION OF WELL FOOTAGES AT SURFACE: 801' FSL - 512' FEL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: SESE 32 12S 22E S		10. FIELD AND POOL, OR WILDCAT: Undesignated
		COUNTY: Uintah STATE: UTAH

11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA			
TYPE OF SUBMISSION	TYPE OF ACTION		
<input checked="" type="checkbox"/> NOTICE OF INTENT (Submit in Duplicate) Approximate date work will start: _____	<input type="checkbox"/> ACIDIZE <input type="checkbox"/> ALTER CASING <input type="checkbox"/> CASING REPAIR <input type="checkbox"/> CHANGE TO PREVIOUS PLANS <input type="checkbox"/> CHANGE TUBING <input type="checkbox"/> CHANGE WELL NAME <input type="checkbox"/> CHANGE WELL STATUS <input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS <input type="checkbox"/> CONVERT WELL TYPE	<input type="checkbox"/> DEEPEN <input type="checkbox"/> FRACTURE TREAT <input type="checkbox"/> NEW CONSTRUCTION <input type="checkbox"/> OPERATOR CHANGE <input type="checkbox"/> PLUG AND ABANDON <input type="checkbox"/> PLUG BACK <input type="checkbox"/> PRODUCTION (START/RESUME) <input type="checkbox"/> RECLAMATION OF WELL SITE <input type="checkbox"/> RECOMPLETE - DIFFERENT FORMATION	<input type="checkbox"/> REPERFORATE CURRENT FORMATION <input type="checkbox"/> SIDETRACK TO REPAIR WELL <input type="checkbox"/> TEMPORARILY ABANDON <input type="checkbox"/> TUBING REPAIR <input type="checkbox"/> VENT OR FLARE <input type="checkbox"/> WATER DISPOSAL <input type="checkbox"/> WATER SHUT-OFF <input checked="" type="checkbox"/> OTHER: Request for APD Extension
<input type="checkbox"/> SUBSEQUENT REPORT (Submit Original Form Only) Date of work completion: _____			

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

Enduring Resources, LLC respectfully request an extension to the expiration date of this Application for Permit to Drill ....

FROM: 9/12/2007  
TO: 9/12/2008

Approved by the  
Utah Division of  
Oil, Gas and Mining

Date: 09-17-07

By: [Signature]

NAME (PLEASE PRINT) Alvin R. (Al) Arlian	TITLE Landman - Regulatory Specialist
SIGNATURE [Signature]	DATE 9/11/2007

(This space for State use only)

COPY SENT TO OPERATOR  
DATE: 9-18-07  
INITIAL: RM

RECEIVED  
SEP 14 2007

DIV. OF OIL, GAS & MINING

**Application for Permit to Drill  
Request for Permit Extension  
Validation**

(this form should accompany the Sundry Notice requesting permit extension)

**API:** 4304738286  
**Well Name:** Sand Wash 12-22-44-32  
**Location:** 801' FSL - 512' FEL, SESE, Sec 32, T12S-R22E  
**Company Permit Issued to:** Enduring Resources, LLC  
**Date Original Permit Issued:** 9/12/2006

The undersigned as owner with legal rights to drill on the property as permitted above, hereby verifies that the information as submitted in the previously approved application to drill, remains valid and does not require revision.

Following is a checklist of some items related to the application, which should be verified.

If located on private land, has the ownership changed, if so, has the surface agreement been updated? Yes ☐ No ☐

Have any wells been drilled in the vicinity of the proposed well which would affect the spacing or siting requirements for this location? Yes ☐ No ☒


Has there been any unit or other agreements put in place that could affect the permitting or operation of this proposed well? Yes ☐ No ☒

Have there been any changes to the access route including ownership, or right-of-way, which could affect the proposed location? Yes ☐ No ☒

Has the approved source of water for drilling changed? Yes ☐ No ☒

Have there been any physical changes to the surface location or access route which will require a change in plans from what was discussed at the onsite evaluation? Yes ☐ No ☒

Is bonding still in place, which covers this proposed well? Yes ☒ No ☐

  
Signature

9/11/2007  
Date

**Title:** Landman - Regulatory Specialist

**Representing:** Enduring Resources, LLC

RECEIVED

SEP 14 2007

DIV. OF OIL, GAS & MINING

STATE OF UTAH  
DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF OIL, GAS AND MINING

FORM 9

CONFIDENTIAL

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.

1. TYPE OF WELL OIL WELL <input type="checkbox"/> GAS WELL <input checked="" type="checkbox"/> OTHER _____		5. LEASE DESIGNATION AND SERIAL NUMBER: ML-47089
2. NAME OF OPERATOR: Enduring Resources, LLC		6. IF INDIAN, ALLOTTEE OR TRIBE NAME: n/a
3. ADDRESS OF OPERATOR: 475 17th Street, Suite 1500 CITY Denver STATE CO ZIP 80202		7. UNIT or CA AGREEMENT NAME: n/a
PHONE NUMBER: (303) 350-5114		8. WELL NAME and NUMBER: Sand Wash 12-22-44-32
4. LOCATION OF WELL FOOTAGES AT SURFACE: 801' FSL - 512' FEL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: SESE 32 12S 22E S		9. API NUMBER: 4304738286
COUNTY: Uintah STATE: UTAH		10. FIELD AND POOL, OR WILDCAT: Undesignated

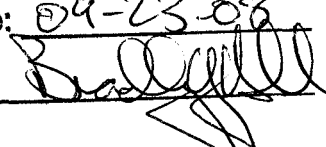
11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA			
TYPE OF SUBMISSION	TYPE OF ACTION		
<input checked="" type="checkbox"/> NOTICE OF INTENT (Submit in Duplicate) Approximate date work will start: _____	<input type="checkbox"/> ACIDIZE	<input type="checkbox"/> DEEPEN	<input type="checkbox"/> REPERFORATE CURRENT FORMATION
	<input type="checkbox"/> ALTER CASING	<input type="checkbox"/> FRACTURE TREAT	<input type="checkbox"/> SIDETRACK TO REPAIR WELL
	<input type="checkbox"/> CASING REPAIR	<input type="checkbox"/> NEW CONSTRUCTION	<input type="checkbox"/> TEMPORARILY ABANDON
	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	<input type="checkbox"/> OPERATOR CHANGE	<input type="checkbox"/> TUBING REPAIR
	<input type="checkbox"/> CHANGE TUBING	<input type="checkbox"/> PLUG AND ABANDON	<input type="checkbox"/> VENT OR FLARE
<input type="checkbox"/> SUBSEQUENT REPORT (Submit Original Form Only) Date of work completion: _____	<input type="checkbox"/> CHANGE WELL NAME	<input type="checkbox"/> PLUG BACK	<input type="checkbox"/> WATER DISPOSAL
	<input type="checkbox"/> CHANGE WELL STATUS	<input type="checkbox"/> PRODUCTION (START/RESUME)	<input type="checkbox"/> WATER SHUT-OFF
	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	<input type="checkbox"/> RECLAMATION OF WELL SITE	<input checked="" type="checkbox"/> OTHER: Request for APD Extension
	<input type="checkbox"/> CONVERT WELL TYPE	<input type="checkbox"/> RECOMPLETE - DIFFERENT FORMATION	

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

Enduring Resources, LLC respectfully request an extension to the expiration date of this Application for Permit to Drill ....

FROM: 9/17/2008  
TO: 9/17/2009

Approved by the  
Utah Division of  
Oil, Gas and Mining

Date: 09-23-08  
By: 

NAME (PLEASE PRINT) Alvin R. (Al) Arlian	TITLE Landman - Regulatory Specialist
SIGNATURE 	DATE 9/5/2008

(This space for State use only)

COPY SENT TO OPERATOR

Date: 9.23.2008  
Initials: KS

(5/2000)

(See Instructions on Reverse Side)

RECEIVED  
SEP 17 2008

DIV. OF OIL, GAS & MINING

**Application for Permit to Drill  
Request for Permit Extension  
Validation**

(this form should accompany the Sundry Notice requesting permit extension)

**API:** 4304738286  
**Well Name:** Sand Wash 12-22-44-32  
**Location:** 801' FSL - 512' FEL, SESE, Sec 32, T12S-R22E  
**Company Permit Issued to:** Enduring Resources, LLC  
**Date Original Permit Issued:** 9/12/2006

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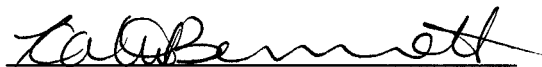
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Has the approved source of water for drilling changed? Yes ☐ No ☒

Have there been any physical changes to the surface location or access route which will require a change in plans from what was discussed at the onsite evaluation? Yes ☐ No ☒

Is bonding still in place, which covers this proposed well? Yes ☒ No ☐

  
Signature

9/5/2008  
Date

Title: Administrative Assistant

Representing: Enduring Resources, LLC

**RECEIVED**  
**SEP 17 2008**  
DIV. OF OIL, GAS & MINING



JON M. HUNTSMAN, JR.  
*Governor*

GARY R. HERBERT  
*Lieutenant Governor*

# State of Utah

## DEPARTMENT OF NATURAL RESOURCES

MICHAEL R. STYLER  
*Executive Director*

### Division of Oil, Gas and Mining

JOHN R. BAZA  
*Division Director*

October 19, 2009

Enduring Resources, LLC  
475 17<sup>TH</sup> Street Ste 1500  
Denver, CO 80202

Re: APD Rescinded – Sand Wash 12-22-44-32, Sec. 32, T.12S, R. 22E  
Uintah County, Utah API No. 43-047-38286

Ladies and Gentlemen:

The Application for Permit to Drill (APD) for the subject well was approved by the Division of Oil, Gas and Mining (Division) on September 12, 2006. On September 17, 2007 and September 23, 2008 the Division granted a one-year APD extension. No drilling activity at this location has been reported to the division. Therefore, approval to drill the well is hereby rescinded, effective October 19, 2009.

If any previously unreported operations have been performed on this well location, it is imperative that you notify the Division immediately.

Sincerely,

Diana Mason  
Environmental Scientist

cc: Well File  
SITLA, Ed Bonner

